Practical Boat Owner®

BRITAIN'S BEST-SELLING BOATING MAGAZINE

MAINTENANCE · PROJECTS · GEAR REVIEWS · SEAMANSHIP · CRUISING

BOATING BY COMPUTER

Could two daggerboards and a laptop change sailing forever?

SAILCLOTH S.O.S

On-water fixes for torn sails

How to drop and repair a lift keel

Leisure 17: rescued from a rabbit hole

Fuses to breakers: easy DIY upgrade

PLUS Sailing a gaffer on the north-east coast

PBO PROJECT BOAT

Installing an exhaust and fuel system

NORDIC FOLKBOAT

The story of one yacht and the Swedish classics it inspired

TESTED

TUG YACHT ON TEST

'A proper little ship'

Lifeboats

1 IN 8 SAILORS FALL OVERBOARD

DO YOU KNOW HOW TO RECOVER SOMEONE FROM THE WATER?

Take our 2-minute quiz to find out how you'll fare if you go overboard:

RNLI.org/overboard

Source: RNLI audience profiling research (2015). The RNLI commissioned independent research into the attitudes to safety and risk of UK yacht sailors. A total of 4,996 sailors responded to a survey run by the study team. When asked about their experience of safety incidents, 12% said that they had gone overboard while sailing a yacht.

RESPECT THE WATER

The RNLI is the charity that saves lives at sea

Royal National Lifeboat Institution, a charity registered in England and Wales (209603) and Scotland (SC037736). Registered charity number 20003326 in the Republic of Ireland

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GLOWTEC

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from TREADMASTER

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Waiting for the tide

with the editor

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Time, gentlemen – please

Boat owning, the unafflicted cheerfully tell us, is much the same as standing under a cold shower tearing up £20 notes, or maybe inflation has pushed it up to fifties these days. Those of us affected by the magnificent obsession that is getting afloat, however, hide behind various ruses to obscure the cost. My own is the 'boat unit', understood by my boat-owning uncle and brother to be worth approximately £50. It's a great way of conning your family and yourself – but unfortunately not your bank manager – that you really haven't spent much.

Where the banknotes-in-shower simile breaks down, however, is in the time taken. Standing under a stream of cold water tearing up the Queen's currency can be accomplished moderately swiftly, but finding the time to fit the items you buy at such great expense from the chandlery can present much more of a problem than buying them in the first place. There must be a law governing the time needed for jobs on boats, but as it probably has its roots in quantum theory and the Heisenberg Uncertainty Principle, it's best just to assume that any task will take at least three times longer than you believe it should.

We'd love to see *Hantu Biru* go to a good home

This rule has been evident throughout the restoration of our project boat, *Hantu Biru*. When we first started, we genuinely believed that we would have her finished and sailing in a twelvemonth. Three-and-a-half years later we're finally reaching the end of the project, but even so we find ourselves racing to beat the clock and finish the engine installation so that we can get her back in the water.

Why, you might ask, are we now in such a hurry? Well, apart from a selfish desire to go sailing rather than spend the summer in the bilge with an angle-grinder, *Hantu Biru* is fast approaching the next chapter in her already interesting life's story. After what will have been four years' ownership by PBO, in which time we have transformed her from a waterlogged shell to a smart family sailing boat, it's time for her to move on to a new owner who can enjoy sailing her and take her on to pastures new.

The deadline for finishing, barring tying up a few loose ends, is early August; the reason is that we will then finish work on a special publication telling the story of *Hantu Biru*'s restoration from start to finish. On sale from 24 August and available to pre-order from the copy service now on 01202 440832, the *Project Boat Handbook* will cost £4.99.

Hantu Biru will then appear once more in the feature boat area at Southampton Boat Show, but this time you'll not only have the opportunity to climb on board and ask any questions you might have about the project, you'll also be able to enter a competition. The prize? *Hantu Biru*.

We'll be publishing all the details of how to enter next month, but it's not often you get the chance to win a boat. She's well-appointed, with new sails and electronics, surprisingly good sailing performance and a comfortable if spartan interior. We'll also be exhibiting at London in January, drawing the competition shortly afterwards, so please come and have a look and we'll try to answer any questions. We'd love to see her go to a good home; I can't pretend that after so many hours working on her it isn't a wrench to say goodbye, but Ben Meakins and I both have our own boats to sail and enjoy and *Hantu Biru* will be much better off in the long term with a new owner who can use her and love her.

Meanwhile, as soon as we get her afloat, we'll be getting in as much sailing as we can – so watch this space for the articles!

Fair winds,

David Pugh

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The 10m junk-rigged catamaran *Oryx*. INSET Pete and Carly Hill

Wife overboard tragedy

A cruising sailor has told of his horror at awakening from a nap to find his wife missing and presumed lost at sea.

Pete Hill contacted Noonsite – the global website for cruising sailors – to share the full details of the tragic loss of Carly.

PBO readers may remember Pete from exploits on his junk-rigged Jay Benford-designed dory *Badger* with his then-wife Annie Hill during the 1980s and early 1990s. Annie's book, *Voyaging On A Small Income*, laid out the essentials of their low-budget cruising lifestyle. Pete and Annie divorced in 2001. Pete remarried Carly and built his latest boat, a modified 10m (33ft) junk-rigged wood-epoxy catamaran *Oryx*, with Carly's help in England during 2012. Since then the couple have cruised across the Atlantic to Brazil via the Canaries and Cape Verdes and from there to South Africa.

On their latest, tragic voyage, they departed Durban, South Africa, bound for Madagascar on 18 June. Hill went below for a nap on 19 June, while the boat was six miles off the South African coast, and when he awoke Carly was gone. After a fruitless two-day search by South African authorities, Carly, aged 58, is presumed to be dead.

Carly, a native of South Africa, had chronicled their adventures on her Facebook page and on her blog. On 17 June, she wrote: '*Oryx* is setting sail for Madagascar tomorrow. We will be taking the scenic route via the Mozambique channel islands and will be off the ethernet for a while. Please keep us in your thoughts and prayers. We will be in contact asap.'

Pete Hill, 65, told Noonsite: 'I am very sorry to have to tell you that on Friday 19 June Carly was lost at sea. We set sail from Durban on the Thursday towards Madagascar and by Friday morning we were about 50 miles NE of Durban. After breakfast together I turned in at 8 o'clock to catch up on my sleep and woke again at 10 o'clock. The sailor's worst nightmare, Carly was no longer on board.

'The wind was blowing westerly at 10 to 12 knots with a moderate sea on a clear sunny day and *Oryx* was sailing at about 5.5 knots under the self-steering. I dropped the sails and tried an all ships mayday on the VHF, but with no replies and no ships in sight. We were 6.5 miles off the coast and had no mobile phone reception.'

Pete retraced their course using the Navionics tablet app that had been running. He arrived back at their pre-0800 position and went inshore to call for help. The National Sea Rescue Institute (NSRI) organised an air and sea search, while Pete started a zigzag search back along his track. The search continued the following day.

Pete said: 'The NSRI coordinated the search using unprecedented resources in a very efficient manner, but we failed to find Carly. The only small consolation is that in the last few weeks Carly has spent a lot of time with her daughter Irene and more recently with her son Dylan, who lives in Durban, and especially, much time with her delightful three-year-old granddaughter Hannah.'

Jorge Gonzalez, *Caicara*

***Oryx* leaving Abraão, Brazil in December 2014 bound for Cape Town**

Planning granted for Swansea Bay Tidal Lagoon

Planning permission has been granted for the world's first tidal lagoon power plant – the Swansea Bay Tidal Lagoon – by the Secretary of State for Energy and Climate Change.

If built, turbines in the proposed horseshoe-shaped sea wall around Swansea Bay, Wales could, according to the developer, generate around 500GWh per year of low-carbon electricity. But before the lagoon becomes a reality, it is still subject to Contract for Difference (CfD) negotiations to establish whether a tidal lagoon at Swansea Bay is affordable and value for money for consumers. Any decision to offer a CfD for the Swansea Bay Tidal Lagoon project will be subject to strict value-for-money considerations, and to State aid approval.

The Secretary of State noted that the proposed development would not significantly impact upon commercial and recreational navigation sailing to and from the port of Neath to the east of the proposed development. However, she is aware that ABP, which runs Swansea Port, and the Royal Yachting Association (RYA), have concerns about wave reflection from the lagoon wall on vessels entering and leaving the port. As a result, a protective provision had been included in the Development Consent Order.

The Secretary of State also noted Monkstone Cruising and Sailing Club's (MCSC) concern about the possible impact on its activities. However, the examining authority has, in response to RYA concerns on this issue, proposed a requirement for the order to ensure that dredging of the MCSC marina was considered by the applicant by way of a dredging mitigation and monitoring scheme. The Secretary of State agreed with the proposal and included the dredging mitigation and monitoring scheme in the order.

The lagoon's six-mile-long seawall would loop two miles out to sea from close to the mouth of the River Tawe and Swansea Docks, to make landfall near to Swansea University's Fabian Way campus to the east; 16 underwater turbines would generate electricity on the rising and falling tide.

Mark Shorrock, chief executive of Tidal Lagoon Swansea Bay Plc, said: 'We see it as a game-changer, paving the way for a fleet of lagoons that can work in harmony with nature to help secure the nation's electricity for generations to come. The tidal lagoons that follow must each make their own compelling social, environmental and economic case to proceed. But they have a pilot project to guide them and a blossoming technical and industrial network to support them.'

BRITISH MARINE
LEADING THE INDUSTRY

New British Marine brand launched

The British Marine Federation has relaunched itself as a 'British Marine' brand to better promote businesses and British excellence in the UK and overseas markets.

The organisation has pledged to invest heavily in a campaign to encourage consumers to look for the new British Marine logo and buy from British Marine members. The new look is the result of a year-long rebranding exercise. Fiona Pankhurst, president of British Marine, said: 'This is a seriously exciting time for British Marine. The new brand will strongly connect our members with Britain's reputation for quality, excellent design and innovation.'

French mooring tax u-turn

The European Boating Industry reports that with more than 26,000 signatures gathered against the proposed mooring tax by the campaign 'Mer Libre', French Minister Marylise Lebranchu announced in early June that the French government would not be supporting the proposed mooring tax bill at the National Assembly.

The decision comes as a relief for the maritime community in France after months of uncertainty. The final decision of the government not to have or reintroduce the specific provisions regarding the mooring tax was welcomed by FIN (Fédération des Industries Nautiques), who launched an appeal for free access to the sea (Appel pour la mer libre) in March.

BSS checks amended to accept new European gas hose standard

The Boat Safety Scheme (BSS) office has amended and broadened its acceptance of gas hoses manufactured to two new standards.

This is with immediate effect as the BSS requirements now recognise the new classes of hose following the recent publication of a new European LPG hose standard. Class 3 and (where appropriate) Class 2 hoses marked with the BS EN 16436 1:2014 standard are now included as compliance options within BSS private craft checks 7.7.3R, 7.9.1R and 8.6.1R. The new additions also apply to the 2002 BSS standards for non-private craft, which sees the relevant checks, C7.10.4, C7.13.1 and C8.2.2f, amended.

The BSS urges boaters, fitters, chandlers and other suppliers to check carefully before hose marked to BS EN 16436 is selected as there needs to be a clear understanding of which class of hose is suited to which part of the gas system. The BS EN 16436 Class 2 hose is unsuitable for the high-pressure side of propane systems because of its potential to burst if the LPG cylinder is subject to extreme summer temperatures, such as the conditions that could be created when a boat is covered up. Accordingly, if hose marked to the new standard is installed on the high-pressure side of any LPG system, the BSS will only accept that showing as Class 3. On the low-pressure (supply) side for propane, or butane, BS EN 16436 Class 2 or BS EN 16436 Class 3 hose can be accepted.

Although the BSS only applies to boats using inland waterways, it is generally recognised as good advice for seagoing leisure craft.

Hoses marked with the new standard. The BSS will continue to accept older BS 3212 Type 2 hoses as long as they remain in good condition

Bart's Bash 2015

Bart's Bash, the global sailing event in aid of the Andrew Simpson Sailing Foundation, has launched participant sign-up with the help of some of the world's best sailors.

Sir Robin Knox-Johnston, Sir Ben Ainslie, Tom Slingsby and Shirley Robertson all feature in a short film which aims to encourage sailors and non-sailors from across the world to take to the water on 20 September 2015.

This is the second time the record-breaking sailing event will take place. Bart's Bash was conceived in 2014 as a participation event in memory of Andrew 'Bart' Simpson. It grew beyond all expectations, with more than 30,700 people taking part in more than 50 countries, raising more than £360,000 for the charity started in Bart's name.

See www.bartsbash.co.uk.

Martin Allen Photography

Pieter van den Hoogenband

YJA condemn Rio's Olympic waters

The Yachting Journalists' Association (YJA) has expressed 'extreme concern' over the use of Guanabara Bay for the sailing events of the Olympic Games in Rio de Janeiro next year.

Despite continued protests over the state of the pollution of the water since the site was first approved in 2009, they say nothing has been achieved to limit or reduce the pollution in the bay, and this has now reached a dangerous level, as well as failing to provide a level racetrack for the competitors.

Only a third of Rio de Janeiro's sewage is treated, and the sailing competitors will need a series of inoculations. In addition to the untreated faeces and urine, Rio's sewers deliver many foreign objects into the bay, which are a hazard to the progress of small sailing craft. The Brazilian authorities promised the bay would be cleared as far back as 2009, but the YJA says the state of the bay is now worse than it was and there appears to be a concerted recalcitrance by the Rio authorities, the International Olympic Committee and the International Sailing Federation to tackle the problem. The YJA strongly believes that it is time to abandon Guanabara Bay as the venue and to move instead to a safe and clean water venue such as Búzios – 75 miles from Rio.

YJA chairman Paul Gelder said: 'It's astonishing that those in a position to solve the Rio Olympics pollution scandal seem to have turned a blind eye and a deaf ear to multiple protests, as well as irrefutable scientific evidence of toxic dangers. This fiasco has been going on for months and our sailors face an unacceptable risk.'

Schengen survey

A survey has been launched to garner support for cruisers who face difficulty with visa restrictions while cruising in European waters within the Schengen area.

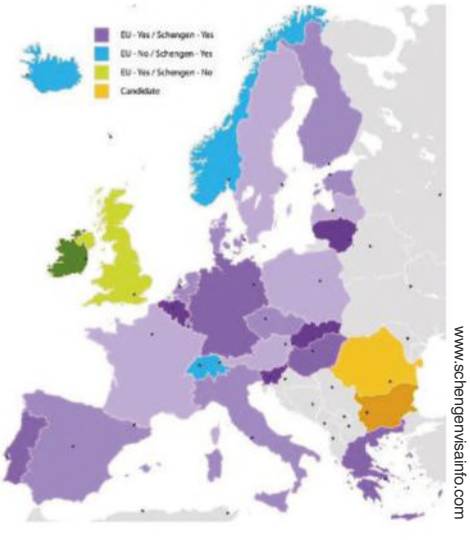
Ocean Cruising Club (OCC) member Kingsley Ross has created the survey to help quantify the economic impact on cruising areas caused by restrictions on visa terms for cruisers from outside the Schengen agreement area who visit by yacht. The OCC is urging cruisers who have any experience with this matter to supply input to this important survey, which is online at https://goo.gl/wkMWxk.

The information will be collated and analysed to support a case for easing visa restrictions on visiting yachtsmen by the EU and Schengen countries. Legislation to establish a touring visa has already been proposed but not acted upon. It is hoped that providing tangible figures on economic impact can help move the new proposed European legislation forward.

OCC Rear Commodore Peter Paternotte is contacting the Netherlands Automobile Association, a Europe-focused organisation looking after the interests of 'land cruisers' from abroad who face similar issues. He said: 'The more support we can muster the better.'

OCC member Gus Wilson, collaborator on this effort in the UK, said: 'The Corsica anchoring tax adds another dimension as it is relevant to European-flagged cruisers as well. Besides using the data to argue the Schengen issue and the new fees in various countries, it could be used to support cruiser-friendly policies in Turkey, Great Britain and elsewhere.'

Visit the OCC forum thread on the subject for updates at www.oceancruisingclub.org.



www.schengenvisainfo.com

White's Westabout campaign

Yachtsman Steve White has launched his 'Westabout' campaign to attempt the solo record for sailing non-stop around the world 'the wrong way'.

This is the realisation of a 15-year dream for Steve, who has planned and worked towards this since long before his successful eighth-place Vendée Globe in 2008/9. The Westabout challenge would see Steve sail a Volvo 70 against the prevailing winds and currents through the Southern Ocean, the wildest and most remote waters on the planet. Steve will be on standby for a suitable weather window to start from October 2016.

Only five people have held the record since it was originally set by Sir Chay Blyth in 1970/71: in fact, more people have walked on the moon. The current record holder is Jean Luc Van Den Heede: Steve will attempt to better the current record time of 122 days and 14 hours, and take the record back for Britain. Sir Chay Blyth said: 'It takes a special character to tackle the trip, and Steve is an extremely experienced yachtsman who I believe has the right skills, tenacity and determination to set a new world record.'

Steve's long-term sponsor, bluQube (cloud-based finance systems), is supporting the campaign, which is based at Portland Marina, Dorset. Steve said: 'Without the help and support of bluQube I wouldn't have got this project over the line.'

Solo sailor Steve White on board his Volvo 70 *bluQube*

Sailing Scenes

‘Perfect racing conditions’ for Round The Island 2015

The 84th edition of Round the Island Race (RTI) saw a 1,584-strong fleet enjoy a day of racing in sparkling conditions.

The Island Sailing Club (ISC) organisers were delighted that every one of the 1,389 boats that finished were across the line before the scheduled 2200 cut-off in order to qualify for a result.

From the initial 1,500-plus entries, there were 104 retirements and 11 OCS/DSQ. Thousands of spectators lined up around the Isle of Wight and on the mainland (including at the Race Hubs at the Royal Southern YC in Hamble and the Royal Lymington Yacht Club), to watch the spectacle.

Others watched via the new RTI TV channel, launched by the ISC and JP Morgan Asset Management and some race partners, which provided live commentary and footage, interspersed with competitor interviews and weather information.

ISC spokesman Dave Atkinson said: ‘We were blessed with great weather and good winds.

‘While there were a number of racing incidents, these are not uncommon when you have this number of people out on the water. However, given the co-operation of all the agencies that work alongside us, everything was handled with the utmost professionalism and skill and also dealt with quickly.’

The day’s rescues included a yacht aground close to Ventnor Haven: towed to safety by the independent lifeboat from Sandown and the RNLI lifeboat from Bembridge. The Coastguard helicopter medically evacuated one person with a head injury, and one lifeboat person was medically evacuated by the coastguard helicopter based at Portland.

Paralympic gold medallist Helena Lucas presented trophies to the race winners. The main prize, the Gold Roman Bowl, went to Giovanni Belgrano’s 11.6m (38ft) classic yacht *Whooper.* Full results are posted at www.rtir.me/results. PBO deputy editor Ben Meakins raced around the island in his Hunter Impala *Polly*, while PBO news editor Laura Hodgetts joined the crew of Sailing Logic’s First 40 yacht *Arthur Logic.* Mason King, skipper of *Arthur Logic*, praised the ‘perfect conditions for the racing,’ and added: ‘RTI is unique, because how many sports could you have Olympic and America’s Cup professionals and beginners all sailing against each other? And it’s a spectacle.’

Next year’s RTI will take place on 2 July, 2016.

DIARY DATES

- **America’s Cup World Series in Portsmouth**, 23-26 July, acws-portsmouth.americascup.com
- **Sutton Harbour Classic Boat Rally in Plymouth,** 24-27 July, experiencesuttonharbour.co.uk
- **Torbay Royal Regatta**, 21- 26 August, torbayroyalregatta.co.uk
- **Portsmouth Boat Jumble**, 23 August. Fort Purbrook, Cosham, . Entry £4, boat-jumbles.co.uk
- **Holyhead Traditional Sail Festival,** 28-31 August, oga.org.uk
- **Essex Boat Jumble**, 30 August, Battlesbridge Antiques Centre, Entry £4, boat-jumbles.co.uk
- **Northern Boat Jumble**, 6 September, Brookfield Farm, Middlewich, Cheshire. Entry £3.50, boat-jumbles.co.uk
- **Southampton Boat Show**, 11-20 September, Britain’s biggest boating festival, southamptonboatshow.com
- **Solent Boat Jumble**, 4 October, Royal Victoria Country Park, Netley, Southampton. Entry £4, boat-jumbles.co.uk
- **Scotland’s Boat Show**, 9-11 October, Kip Marina, scotlandsboatshow.co.uk
- **Kent Boat Jumble**, 11 October, The Hop Farm, Paddock Wood, Tonbridge. Entry £4, boat-jumbles.co.uk
- **East Hants Boat Jumble**, 1 November, Havant Leisure Centre. Entry £3.50, boat-jumbles.co.uk
- **London Boat Show**, 8-17 January 2016, londonboatshow.com
- **The Transat 2016** start, Plymouth 8 May 2016, thetransat.com

Send us your diary dates to pbo@timeinc.com

See more online at www.pbo.co.uk

ACWS Portsmouth countdown

Shaun Roster

Emirates Team New Zealand line up with Land Rover BAR

The final countdown is on for the America’s Cup World Series (ACWS) Portsmouth.

This summer’s ACWS is the first stage of competition in the 35th America’s Cup, which will culminate in the America’s Cup (Finals) in 2017 in Bermuda. The Portsmouth event will run from 23 to 26 July, and in addition to an action-packed spectacle out on the water, there will be a four-day programme of entertainment ashore. Six teams will compete in this series, racing on a relatively short course, close to the shore to allow spectators to catch the detail of this exciting event.

More than 10,000 tickets have been bought for the Fanzone and more than 100,000 registered for the free-to-view Waterside Festival Arena. In the evening, pop and rock singers, and The Massed Bands of Her Majesty’s Royal Marines, will take over for Portsmouth Live!, a ticketed celebration held over three nights. Tickets are still available for the official Fanzone Arena, the paid-for ticketed space in the Race Village on Southsea Common with expert commentary and entertainment.

The on-the water spectator area is being managed by Queen’s Harbour Master Portsmouth (QHM). Small boats are welcome, but QHM is requiring vessels over 20m to apply for authorisation first owing to space constraints and the number of expected spectator vessels. If you are planning to attend, make sure you read the full Local Notice To Mariners No 33/15 at www.royalnavy.mod.uk/qhm/portsmouth/local-notices.

Alongside the musical entertainment and AC45 catamarans racing in excess of 40 knots, there will be aerial displays and International Moth racing.

- ticketmaster.co.uk/acwsportsmouth

PBO Regional News

News from your cruising area

Send us your local news stories. Email PBO news editor Laura Hodgetts at newspbo@timeinc.com, tel: 01202 440825, or write to the address on page 5

SOUTH

FATAL COLLISION

A man has been questioned by police following a fatal collision between a RIB and the powerboat that carried it on the Solent earlier that day. Ryan McKinlay, 36 from Gosport, died as a result of the crash which happened on 19 June at Osborne Bay, Isle of Wight. Ryan was travelling on board a Williams RIB, which was being used as a tender for *True Blue*, a Fairline Targa 62. Following first aid from Gosport and Fareham Independent Lifeboat crews, Mr McKinlay was airlifted to St Mary's Hospital but later died from his injuries.

RIB fatality Ryan McKinlay

HAMBLE STARS RETURN

Created at Hamble in 1925, the Hamble Star One Design dinghy was the boat to race until Merlin Rockets and National 12s took over in the 1960s. Now the Hamble Stars are returning home after many years at Erith Yacht Club on the River Thames, this time to create a new fleet of eight boats at Old Bursledon. Hamble River Sailing Club is where the Stars were originally based and Jonty Sherwill, a former commodore, was tipped off by an old sailing friend that the club's beloved old boats were to be sold off. Keen boater and Old Bursledon waterfront resident Mike Blackman bought eight boats, sight unseen. With a new trophy for an annual team challenge already being discussed, look out for the Hamble Stars when they race again at this August's Bursledon Regatta.

CHANNEL ISLANDS

BREAKWATER CONCERN

Concerns have been raised by States of Alderney officials and local residents about the condition of the island's 151-year-old breakwater. The Bailiwick of Guernsey has been responsible for the upkeep of the breakwater at Braye Bay since 1987 but, while maintenance of the superstructure has been carried out, erosion of the foundations has not been addressed and rock lost every year has not been replaced.

SOUTH-WEST

WOODEN YACHT SINKS

Lifeboat crews in Cornwall lost a battle to rescue a historic wooden yacht after finding the skipper frantically pumping out the incoming water. RNLI lifeboat volunteers from Sennen Cove and St Ives were called on 28 June to assist a lugger, *Ibis*, towing a small historic yacht that was taking on water about a mile west of Cape Cornwall. The skipper on board the 7.3m (24ft) wooden yacht was manning a pump but unable to cope with the water ingress: the lifeboat's salvage pump pumped one to two tonnes of water before a tow was established with the lifeboat. However, the tow line parted and took an hour and a half to re-establish 'due to the difficulty with fixings on the yacht'. Around 45 minutes later the yacht had to be abandoned as it was very close to sinking.

Terry George, Sennen Cove RNLI coxswain, said: 'Unfortunately the situation was just too dangerous to continue and we were forced to abandon it. Truly devastating for the skipper, and we wish him well.'

Cornish lifeboat crews were unable to save a historic wooden yacht as the situation was too dangerous

RNLI

TRANSAT 2016

Plymouth will host the start of The Transat on Sunday, 8 May 2016 – the heir of the oldest single-handed transatlantic race, the OSTAR. The 2,800-mile race across the North Atlantic is renowned for wild storms and tough upwind conditions, icebergs and freezing fog in the final part, and can take between eight to 19 days for all the boats to finish. Racing classes invited to take part in the 2016 edition include Class 40 monohulls (40ft) and Multi 50 multihulls (50ft), IMOCA 60 Class (60ft) monohulls and Ultimes multihulls (51ft-105ft). The North American city hosting the finish will be confirmed soon.

WALES

RHYL DREDGING

An operation to dredge more than 22,000 tons of material from Rhyl Harbour as part of a major annual maintenance programme has left boat users angry. The dredging started in May and finished at the end of June, but harbour users say more dredging took place on nearby beaches than in the harbour itself. Anthony Parry, representing the Rhyl Charter Skippers Association, said: 'The contractors have barely dredged the harbour. A lot of people are unhappy.' A spokesperson for Denbighshire County Council said: 'Some harbour users have expressed dissatisfaction, and we are working with them to resolve any issues.'

IRELAND

VISITOR BERTH CUTBACK

No visitor pontoon berths will be available in Dunmore East harbour this year because of major dredging works. However, some visiting boats may be able to use Waterford Harbour Sailing Club swinging moorings provided they get prior permission from the club. Dredging is being carried out at the entrance to the harbour and in the harbour basin and is due for completion on 30 September, weather permitting.

HARBOUR CLOSURE

Courtown Harbour, on Ireland's south-east coast between Arklow and Wexford, is closed to all vessels until October as both piers are to be rebuilt following storm damage. The harbour itself will be drained in August to facilitate pointing of walls and deepening of moorings. The contract is for in excess of €1.2million. Courtown Sailing Club will only be running a limited dinghy programme this season with no racing for the yachts. The nearest safe berth for any vessel is Arklow.

NORTH-WEST

DRAMATIC DESCENT

Whitehaven Marina has been praised by organisers of the Whitehaven Air Show for the team's quick response to a drama that unfolded on 19 June during an aerobatic display. A Red Devil whose parachute failed to open was caught by his colleague in mid-air, and both landed safely in the sheltered water of Whitehaven Marina in front of a crowd of more than 3,000 people.

The planned emergency procedures followed by Whitehaven Marina and the team's quick thinking meant that the two parachutists were back on dry land, tucking into a pie and pint, within 10 minutes.

This mishap fortunately ended with a safe landing in Whitehaven waters

SCOTLAND

NEW MARINA

A major redevelopment project to expand existing pontoon facilities at Campbeltown Harbour is now complete, resulting in a smart new marina. The new Campbeltown Marina offers 54 berths on finger pontoons, main pontoons and breakwaters. It can accommodate boats of up to 33m with a draught of 3m. Each pontoon has hook-ups for water and electricity and there is a new dedicated shower and toilet building. Access to the marina is available at all states of the tide. There is a new access bridge from the quay

to the fully-piled pontoons, and the U-shape of the pontoons allows for a more flexible berthing arrangement. Both visitor and long-term berths are available.

SCOTLAND POWERS

Mooring rights, marina development and fish farms in Scotland could all be managed by local councils rather than the Crown Estate after the Scotland Bill is passed. An RYA Scotland spokesman said: 'A level of concern lies with devolving powers beyond the level of a single national body. The changes suggested could make it more difficult for key stakeholders, such as RYA Scotland, to identify and engage with multiple local bodies and vice versa. They could also lead to inconsistencies which would prove detrimental to the interests of RYA members and the wider boating community.'

BBC SHIPPING FORECAST

The BBC has advised that the midday shipping forecast will not be available from the Westerglen transmitter between 21-28 July 2015 due to maintenance work. The Burghead and Droitwich LW transmitters will be unaffected. It is hoped that boaters served by the Westerglen transmitter may still be able to hear Radio 4 LW from the other two transmitters, although not as clearly, but this is not guaranteed.

Listeners will be reminded about the switch-off in the days leading up to it. If you have internet access, it is possible to hear the 0048 and 0520 shipping forecast live by going to the Radio 4 homepage and clicking on 'listen live'.

EAST

STAG-DO RESCUE

Nine men on a stag-do were plucked from mudflats after they strayed from the deep water channel and grounded their rented cruiser on Breydon Water. Three RNLI lifeboats took five hours to reach and rescue the men from the remote mud bank. Rescue vessels were sent from the Great Yarmouth and Gorleston RNLI station.

SOUTH-EAST

ATALANTA ANNIVERSARY

This summer, the Atalanta Owners Association (AOA) is celebrating the 60th anniversary of the first Fairey Atalanta to be launched. Festivities will take place at the West Mersea Regatta on 22 August, where all classes of Faireys will be competing and displayed for anyone interested in the Uffa Fox-designed boats.

The AOA's oldest and youngest members, aged 92 and 13, will be among those participating. **www.atalantaowners.ning.com**

INLAND

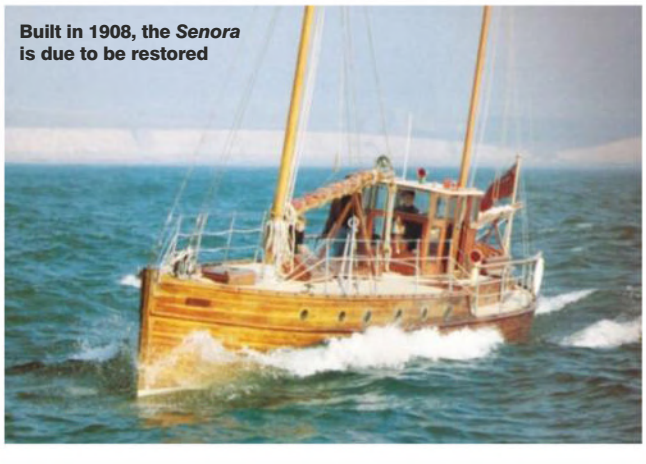
BOATERS PROSECUTED

Spelthorne Council has successfully prosecuted the owners of three boats illegally moored on the River Thames at the public moorings adjacent to Dockett Eddy Lane in Shepperton and at the public mooring at King's Lawn in Sunbury-on-Thames. The council prosecuted the boat owners having received complaints of some boaters persistently mooring in excess of the 24 hours permitted within a 48-hour period at these sites. Magistrates decided the defendants had moored in contravention of Spelthorne's by-laws and ruled that they should pay a total of £1,400 in fines and £1,050 in costs paid to the council.

NORTH-EAST

HISTORIC YACHT RETURNS HOME

A 107-year-old yacht is returning to Sunderland for restoration after campaigners raised more than £20,000. The *Senora* Trust is bringing the *Senora*, built on the Wear in 1908, back from a scrapyard where they said the boat was weeks away from being used as firewood. The restoration will be carried out by 24 trainees and is hoped to be completed in time for Sunderland's hosting of the 2018 Tall Ships Festival. North East builders' merchant James Burrell donated £10,000 to the restoration campaign, with the rest coming from public donations. The *Senora* Trust is now working to raise £250,000 to launch the next phase of the project.



Built in 1908, the *Senora* is due to be restored

Next month

SEPTEMBER ISSUE ON SALE THURSDAY AUGUST 13

PRACTICAL

Engine installation
- Also, attending to the PBO Project Boat's cooling system, throttle and gearbox controls and shaft seal

Plus
- Cold moulding demonstrated
- Fitting a Volvo engine to a Moody
- Convert a launch for easy access
- Tips for using a power router

TESTED

Four-speed winches
- PBO puts Pontos' four-speed winch technology through its paces

Get to grips with tablets
- The convenience and adaptability of tablets and sailing apps

BOATS

Laurent Giles designs
- 'Skill, artistry and embrace of innovation'

BayCruiser 26
- On the water in the new offering from Swallow Boats

SEAMANSHIP

Telltale troubleshooting
- Can't get your telltales flying? We show you how

Fore and aft moorings
- A helpful system in busy rivers

CRUISING

Brixham
- A charming fishing town with much to recommend it

Visiting the Shiant Islands
- Scenic splendour in the Hebrides

Contents subject to change

SEPTEMBER ISSUE ON SALE THURSDAY AUGUST 13

PBO

Bargains of the month...

More great bargains in the Chandlery section starting on page 52

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PBO Letters

Email pbo@timeinc.com
or write to us at the address on page 5.
Photos are appreciated, letters may be edited.

Readers share their thoughts and opinions

LOCK LADDERS IN FRENCH CANALS

Richard Hare writes: 'With *Keppel* still or moving slowly, Janie scaled some ladders above tranquil water...'

'...Preferable to losing control in the fiercer locks. Anyone falling into this is likely to be killed'

Right or rung?

Re Richard Hare's enjoyable 'cruise circuit guide through France' articles (PBO July and Summer), I strongly feel that his advice for dealing with locks is not safe. Climbing ladders in French locks, especially on the Seine, is dangerous! We have cruised the length of France on our Southerly 105 *Enterprise,* which is a longer boat than Richard's, but we have always just used a centre line. Okay, the boat can rock about, but large fenders stop any damage. It's much better to employ this method than to risk a crew member falling.

Stephen Free
Knutsford, Cheshire

Richard Hare replies:
In both parts I wrote that I doubt we'll find an expert who'll put in writing that we should use ladders in locks. However, several of the older canals (Bourgogne, Midi, Centre, Garonne etc) have many 'bare-walled' locks that offer no facility for using a centre warp. Some of these do not benefit from a staithe or a bank where a crew can be put ashore by a keelboat.

Your Southerly is a centreboarder that offers little resistance to violent undercurrents as locks recharge. Keelboats are significantly more difficult to discipline. Fatality is more likely from bollard-hopping a keelboat in a turbulent lock than climbing a ladder in a tranquil one, but that's our personal judgement. Indeed, we almost lost control of our boat like this (see PBO Feb 2011) during the first week of what ended up as five years of safe inland waterway keelboat cruising. Since then, Janie has kept Keppel*'s for'ard warp bar-taut while* Keppel *ascended and I drew in slack from the cockpit.*

I'm with you regarding Seine locks: nonetheless, when ascending, climbing ladders was sometimes the only option. On the plus side, these locks were shallow, and I'm sure the lock-keepers in turrets kept a wary eye on things.

So long as a ladder is sound and we have competent crew on board and someone who can scale a ladder, we shouldn't have a problem: but we must form our own judgement according to how our boats react in this situation.

Weeding matter

Re Bill Rothwell's query about the canal depth between St-Malo and Redon (Ask the experts, PBO July), we had problems in my lift-keel Etap 26 with thick weed from the lock at Trévérien and had to pull the boat using long ropes to both banks with one crew on the helm.

Fortunately both banks were clear of trees and large bushes on this stretch so we made progress, and estimated that we pulled the boat 3½km to Évran. It was thirsty work! An official informed me that they had already cut the weed in the canal twice and were about to do it again. We did try pulling the boat by towing it behind the Avon and rowing, but without success. With a saildrive and folding prop the cutter couldn't cope with the weed, but we saw a motorboat making progress in the other direction and concluded that an outboard on the back of the boat, just below the surface and clear of the weed, might be the answer.

Richard Williamson, by email

Pack it in

Re Reg Dixon's Wayfarer mast query (Ask the experts, PBO June), from my experience the mast loads should be taken through the step, not the pivot housing. If there is a gap under the mast step and loads are going through the pivot pin then I would simply pack the area beneath the step with some thin alloy or stainless until the pivot pin is free to rotate in its housing. This is a safer and simpler procedure than tinkering around with the mast.

Chris Lee, by email

Mike Coates replies:
That's correct. Wayfarer masts were supplied with the tenon sawn off the heel plug: this allowed the bottom of the mast to be packed as necessary with shims, usually Tufnol sheet. In later years the heel tenon was left in place and a conventional channel-type step was fitted: this also gave some lateral support to the bottom of the spar. It will therefore be necessary to pack the step as required to ensure it is taking the load off the pivot tube.

No mean feet

Re 'Shortening sail single-handed' (PBO Summer), having sailed single-handed for 25 years I have lived with all the methods mentioned in the article. I now sail *Rascal*, a Superseal 26 set up for ease of single-handing. All halyards and reef lines lead to the cockpit with clutches (two lines for each reef), the stack pack has lines to the cockpit, a blade is carried (but rarely changed over to) for the roller headsail, and there's a Magic Furl cruising chute for light airs downwind. Apart from a final push and zip-up of the stack pack I can set reef and furl sails without leaving the cockpit.

However, the most important advice is to wear shoes when on deck. When sailing single-handed you rely totally on being able to perform all tasks: a stubbed toe in the middle of reefing could disable you even if only for a few minutes, but this could still land you in all sorts of trouble!

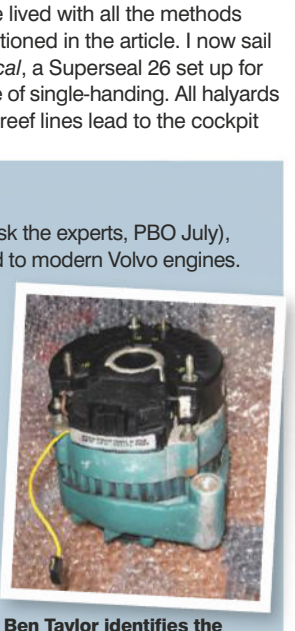
Philip Linsell, by email

Philip Linsell's Superseal 26 is set up for ease of single-handing

Yellow alert

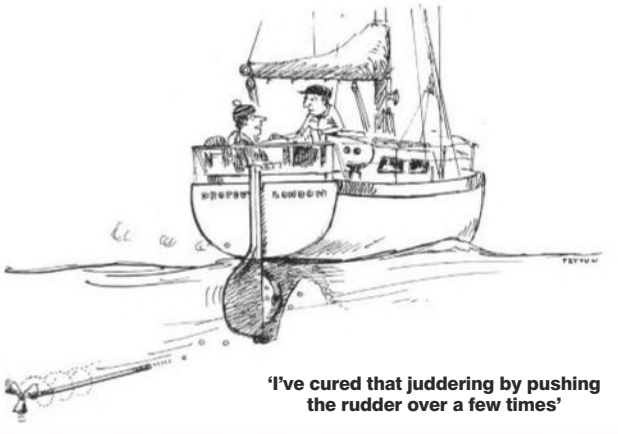
Re 'Yellow wire whys and wherefores' (Ask the experts, PBO July), these Valeo alternators are commonly fitted to modern Volvo engines. The yellow wire is a battery voltage-sensing wire that on standard installations is connected to the B+ terminal with a ring/spade adapter. If a splitting diode is used, this wire normally connects to the 'services' output of the diode to compensate for the voltage drop of the diode. This is not a field control wire for a smart regulator: if you wish to connect a smart regulator to these alternators you still need to solder a wire directly to the brush holder. In some cases the alternator will not charge at all without this yellow wire connected. Hope this helps!

Ben Taylor, by email



Ben Taylor identifies the yellow wire coming from this alternator as a battery voltage-sensing wire

PEYTON'S PICK FROM THE PAST



'I've cured that juddering by pushing the rudder over a few times'

Taken from Practical Boat Owner July 1995

Handling breakdowns

■ Jump starters (PBO Summer) might be useful for breakdown services but they are not foolproof, particularly in a marine environment. They require regular charging and contain the type of battery – the same as a normal starter battery – that can fail without warning. Moreover, they are of no use in the event of flooding wrecking the starter motor. A far more reliable solution to a flat battery is a starting handle. You can probably pick one up at a boatjumble for a tenner – a lot cheaper than a jump start pack. They also weigh less and require no maintenance. Given that electrics and salt water never mix well, a method of manual starting should be provided for most

Simon Mitchell uses a starting handle for his boat and car engines

engines. I follow the same philosophy with my cars, as the photo shows: note the hole for a starting handle in the bumper.

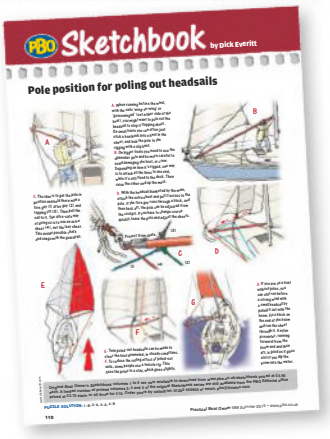
Simon Mitchell
Tiptree, Essex

Working to scale

■ Re 'Prop blows the diesel' (Letters, PBO July), reader Keith Holder appears to attribute the engine's overheating problem to a fouled prop, but this is not the case. A fouled prop will actually spin with less effort required than a clean one. The reason the boat is going slower is because the fouled prop is not converting the rotational force from the engine into thrust, and that gives the engine an easier time, like a car's drive wheels slipping on ice.

However, if increasing the engine revs to try compensating for the loss of speed results in overheating, that's an entirely different problem. Your engine should be able to run at maximum revs with little or no increase in temperature. If it doesn't, and assuming there are no mechanical problems in the engine or gearbox, there is a fault with the cooling system. One of the more common problems I have seen is heat exchangers almost completely blocked with scale. These will often provide sufficient cooling to cope with an engine run at moderate speeds, but will overheat when revs are increased.

Malcolm Tuck, Erith YC, London



Pole position

■ Dick Everitt's Sketchbook (PBO Summer) had some useful tips on poling out headsails. One technique not mentioned, and used often by myself when sailing single-handed, is to deploy the pole to a furled genoa. It's possible to attach the pole to either the clew of the sail or the guy, and it stays in place because of the uphaul/downhaul. The only downside is that if deployed to the guy, it may on occasion swing to and fro between the shroud and the forestay before the sail is set. Once set up, the sail can be safely deployed or reefed from within the cockpit in the usual manner. Course changes are always more tricky when poled out, but by furling the genoa with the pole attached it is possible to luff quickly (or gybe if need be), which can be very useful when in shipping lanes.

Nigel Campling
Dutch Courage of Cowes

SEADOG OF THE MONTH

Our boxer Heol has been sailing in Brittany since he was a puppy. 'Heol' means sun in Breton, but 'Eole' is also the god of wind in ancient Greece. At all times on board, Heol wears a special hoisting harness that we can secure him with when the sea is rough. It also means we can get him back on the boat should he fall overboard, and we can use it to lower all 35kg of him to the dockside. Heol wears non-skid slippers so he does not scratch the deck, and sunglasses to protect his eyes. He is a true sailor!

Guillaume Nicolle

Seadogs galore!

Visit our seadog gallery at www.pbo.co.uk/seadogs or scan this QR code with your smartphone.

Send us your seadog photos for our web gallery and your pet may be lucky enough to become Seadog of the Month and win you £30

PBO PUZZLE 192

Match the flares to their intended use.

A: Orange smoke
B: Handheld white
C: Handheld red
D: Red parachute
E: Buoyant smoke

1: Thrown downwind into water when in sight of rescuer in daylight
2: To attract attention, fire two at five-minute intervals
3: In daylight, in sight of a rescuer
4: When at risk of collision
5: Night and day, in sight of rescue

■ **Find the solution at the bottom of page 106**

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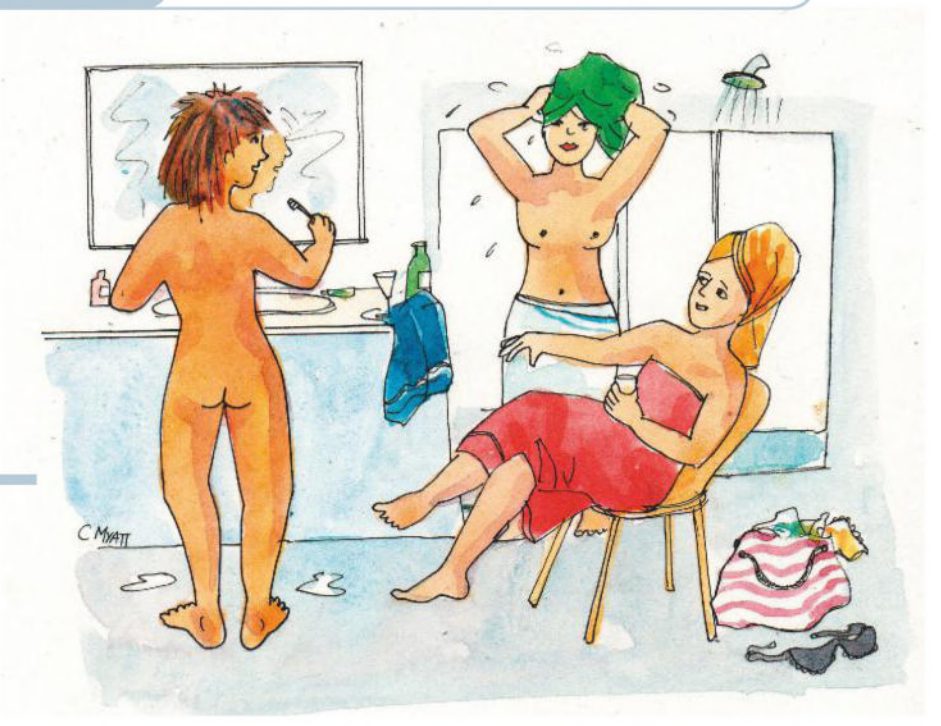
Dave Selby

Mad about the boat

Dave Selby is the proud owner of a 5.48m (18ft) Sailfish, which he keeps on a swinging mooring on the picturesque Blackwater estuary in Essex

A clean getaway?

Some sailors claim to know all about showers in marinas the world over, but it won't wash with Dave



'So he said to me, I'm not pulling any more of your silly ropes until you say please...'

I've just returned from Lisbon. It's in Portugal. The showers in the marina were fantastic. Other than that there's nothing much to say about this spectacular city which was home to Magellan, from which Henry the Navigator and Vasco da Gama embarked on their voyages of discovery, where Christopher Columbus anchored on his way back from finding the Americas and where I discovered an intimate little bar where beautiful Fado dancers whirled faster and faster into the giddy night. Trouble is, I probably couldn't find it again; but I know you're interested in loftier matters, for the simple reason that there are really only four types of sailor.

We reveal ourselves the moment we step ashore. There's the type that craves a shower first and a beer second, and ones who want a beer first and a shower second. This second type never actually gets around to having a shower. The third type is called 'women,' but no one's figured out what they want. Then there's the fourth type, but we'll get to him later.

In the meantime, the fact is that from Levington to Lymington to Le Havre there's the same bloke getting into a lather in all the marina and yacht club shower blocks. I couldn't tell you if he has a female counterpart, but he's the guy who, as he vigorously rubs himself down to the point where smoke and odd squeaking sounds rise from his nethers, says: 'Third cubicle on the left, mate, you'll get 40 seconds on the push-button; the others deliver 20 to 25 max, and the water pressure's down'.

We sailors all like a shower to cleanse ourselves of salty crust, but for many it borders on obsession. Tread the thick crested carpet of the Royal Off-Shore Cursing Club bar and the fantastic tales of far-flung and exotic lands broaden your horizons. All you have to do is listen and learn: 'Antigua, old boy, best showers in Caribbean'. As for Martha's Vineyard, 'Frankly disappointing, merely tepid after 2pm, shan't go there again,' and then there's the Galapagos Islands: 'Need to do something about the water pressure if they expect people to visit. Bally big tortoises apparently; didn't see 'em'.

In fact, this fount of all shower wisdom might actually be one and the same bloke, 'cos there's no doubt he gets about a bit and I'm sure you've met him on countless occasions. He's the shower shaman, the guru of gush. He knows, for example, that in a particular shower in Monte Carlo you can make savings by using casino chips, if you file them down in a certain way.

In other cases, tokens bought in one marina provide better value in another, but where unfortunately the soap is diluted. Others are completely free, and in a particular spot on the East Coast which used to be a naval training base, they have officers' baths the size of wave tanks. There's also one somewhere in which six of the 10 cubicles have calcium build-up in their shower heads. This is all vital cruising advice, and the shower shaman, who's working on a patent for a device to hold in the spring-loaded shower buttons so you don't have to lean against them to shower, has also approached the RYA to sponsor a book that he's sure will be a million seller: '*SUDS: The Sailor's Ultimate Directory to Showers of the World* – new edition, now with star ratings!'

Cruising sailors can often be heard in showers dancing hornpipes on crusty cruising chutes

Frankly I wouldn't bother splashing out on a copy, 'cos it sounds like a load of old flannel and it's all a bit OSD – that's Obsessive Shower Disorder – but then we sailors all have a touch of that. I've been marina-bound and have taken five showers in a day 'cos at some places there's nothing else to do, and if the water's free you've just gotta go for it.

Serious cruising sailors know even better how to optimise resources, and can often be heard in shower cubicles dancing hornpipes on crusty cruising chutes, clothes, sheets (that's ropes and bed linen), warps, fenders, standing and running rigging, and anchor chain. Long-term liveaboards draw the line at washing themselves, their clothes and sheets (bed linen, that is).

That about covers it, apart from the fourth kind of sailor: me. I've just spent £5 at a boat jumble on a 'solar shower'. This is a fancy name for a black plastic bag with a shower nozzle. It means I can avoid all the weirdness that goes on in showers and, best of all, I can take a shower while drinking a beer in the cockpit of my Sailfish. Bliss, basically.

I have some of my biggest thoughts in the shower, and that set me thinking. Is it a bloke thing, or are women just as weird?

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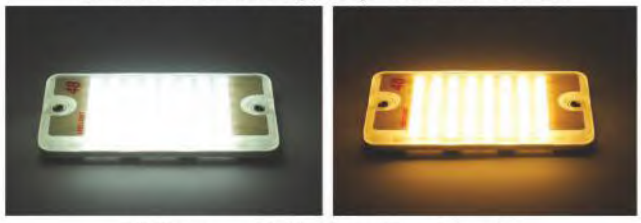

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Sam Llewellyn

Flotsam and jetsam

Sam Llewellyn is editor of *The Marine Quarterly*, www.marinequarterly.com, and author of nautical thrillers. Three years ago he bought a Corribee on eBay

Lone arrangements

Quite apart from anything else, single-handers should really ensure that they never run out of single malt

'When single-handing, the true joy of solitude comes from doing what suits'

The crew galumph aboard. The mooring lines come off. The boat's nose points at the open sea, and the pierhead falls astern. There is cheery discourse, and someone cooks dinner. The hours draw on. Conversation slackens. Harnesses are checked, lights lit. Night falls. The navigator, who is trying to do it without electronics, gives an EP. The cook, who has stopped being sick, checks this on his GPS. The results are markedly different.

The navigator attributes this to Chinese meddling with the GPS signal consequent on their territorial ambitions in the Spratly Islands. The cook reckons that it is to do with the navigator's incompetence and sticks his head back in the bucket. The skipper starts singing, flat. A mood of grim hostility settles over the dark cockpit. The cook steers one course on his watch, the navigator another on his, and the only thing they agree on is that the skipper's snoring is intolerable. Someone has forgotten to bring any whisky. At 0100 the boat goes aground on the Goodwins. None are saved.

This is the kind of thing that pushes sailors into single-handing. There are other causes. The boat is the owner's joy, and seeing people wandering all over it with their great stupid feet breeds resentment. Strangers refuse to understand that that new bit of varnish should not be trodden on, or that the cup rack by the sink is useless for cups but handy for holding bog paper. Furthermore many people, particularly spouses, fail to appreciate the beauty of the cherished boat, viewing it instead as something that is not only a rival for their affections but which also makes them vomit.

The sacred text of single-handing is certainly Joshua Slocum's *Sailing Alone Around the World*. His self-steering system seems to have been a model of its kind, and so does his digestion, which enabled him to eat pancakes made with tallow salvaged, if I remember rightly, from a beach in Patagonia, without suffering evil consequences. Tough eggs, like Slocum, Knox-Johnston, Ellen MacArthur and most French sailors, seem to power through all such difficulties, climbing masts at sea in high latitudes (MacArthur) and running out of whisky (K-J) without much complaint. They are exceptions. Most single-handers potter along coasts, tiller and teacup in one hand, jib sheet, almanac, hand bearing compass and chocolate digestive biscuit in the other, hoping for the best.

People wandering all over your boat with their great stupid feet breeds resentment

Picking up buoys is easy enough, particularly if you are not too proud to lasso them with a loop of line from the cockpit and sort yourself out properly later. Marinas can pose problems for the soloist, but a breast spring hooked on to a bollard and motored against will keep everything tidy until warps and springs can be arranged in due order. The main thing is not to fall overboard, which means wearing a harness whenever you are out of the cockpit, which should be as seldom as possible. The nuts and bolts of it all, particularly the safety department, are decently covered in a recent ebook by Colin Stroud, deputy station officer at the South Woodham Ferrers Coastguard Rescue Team, available from www.solocoastalsailing.co.uk.

So does the inshore single-hander have anything to learn from the offshore model? Racers tend to go in for sleep deprivation training, which turns them into zombies capable only of sail changes, winching, sending back videos to their sponsors and in extreme cases running into outlying bits of New Zealand. Other handy skills are sewing up long cuts in the leg and repairing broken teeth with quick-setting epoxy.

Ambitious coastal single-handers may insist on performing home dentistry in the approaches to Littlehampton, staying awake long past Sailing By and rehydrating dog-food granules while sailing in Carrick Roads.

But it strikes me, having tried all the above or anyway thought about them quite hard, that this is overdoing things. After many solitary sea hours, the conclusion is this: when single-handing, the true joy of solitude comes from doing what suits. Personally, I like to make a passage plan terminating after a decent interval of sailing in a pleasantly sheltered anchorage where a spot of wine can be drunk, eight hours kip had, and possibly friends visited on shore. There are certainly lessons to be learned from Slocum, MacArthur and Knox-Johnston, but they are all in their way negative. For the record, here they are: make pancakes with butter, not tallow. Do not under any circumstances climb your mast when you are alone at sea. And never, ever run out of whisky.

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Andrew Simpson

Monthly musings

Yacht surveyor and designer Andrew Simpson cruises with his wife Chele in his own-design 11.9m (39ft) yacht *Shindig*. Read his blog at www.offshore-sailor.com

'A market staged in a posh marina is unlikely to be a great place to buy onions or scrubbing brushes'

Trading places

With a little forethought and a practised eye, seafarers can benefit greatly by playing the markets

Of course there are street markets everywhere, but they are a particularly popular and useful resource for cruising sailors who arrive from the sea into surroundings that may be unfamiliar. But not all markets are the same. They vary widely, both in tone and usefulness.

Much depends upon the swankiness of the surroundings. A market staged in a posh marina like the one pictured is unlikely to be a great place to buy onions or scrubbing brushes, but if you fancy a natty line in Somalian gowns, tribal masks, a Moroccan fez or counterfeit sunglasses you can't go far wrong.

And you don't have to spend a lot of money. Chele recently bought a pair of earrings, the main constituents of which were fashioned from discarded bicycle inner tubes. Naturally, I was mightily impressed and went to some lengths to praise the ingenuity and quality of the workmanship; particularly the conservational virtues of leaving such valuable substances as silver, jade or, dare I say it, gold in the ground for future generations.

Indeed, I've suggested that should she wish to extend her collection of stretchable adornments she would find me entirely agreeable – not that I would have much say in the matter, of course.

But let's turn our backs on trivia. Of far more interest to cruising sailors are those market stalls piled high with fresh produce and what used to be called ironmongery – meaning hardware and tools. I once bought a set of caulking irons from a trader who didn't know what they were – and at a very keen price indeed. In these GRP days they don't see much use, but they are there amongst my tools if I ever need them.

But generally you won't find markets of the rougher and readier persuasion amongst the gleaming tower block hotels with their impossibly blue pools and their 'all-inclusive' catering. In my experience, tangled streets or tree-shaded squares surrounded by tenement blocks are their proper habitat. Waterfronts, too, are favourite locations. I believe there's an inverse relationship between the chicness of a market and the potential for interesting discoveries; the tattier the better being a general truth.

I once bought a set of caulking irons from a trader who didn't know what they were – and at a very keen price indeed

And there are obvious national influences, depending on where you are. We have bought extraordinary cheeses in La Rochelle, salted cod in Portugal, olive oils in Greece, exceptional local wines in Sicily and, of course, rubber earrings in Lanzarote. And doubtless we will now be buying the freshest tropical fruits in the West Indies.

On which note: along with the relish, we've also learned to be sceptical. The word 'fresh' should be treated with caution. Vegetables that have lost their bloom are relatively easy to spot, but that can't be said about everything. More than one sailor has bought allegedly fresh eggs to find they were probably laid by a broody pterodactyl a couple of ice ages ago. Eggshells, being opaque, provide no clue to whatever may lie inside, and innocent sailors with their travelling ways provide a good way of disposing of obsolete stock without fear of reprisal. I myself got conned on some rechargeable batteries that were capable of no such thing; and also met a man who told me that, on unwrapping a smartly-packaged shirt, discovered it had one long sleeve and one short.

Then there is out-and-out crime. That crowd-gathering juggler might appear to be performing for nothing, but his pocket-picking pal threading through the jostle could well be lifting enough for the two of them. Pickpockets usually work in pairs, one dipping and the other melting away with the spoils. Handbags and backpacks are especially vulnerable, so I always carry my wallet in a zipped pocket.

But there is no doubt about it; street markets are fascinating places, pulsing with life and energy and an exciting contrast to the solitude of a sailboat in open water. Don't get me wrong: I wouldn't want to spend every day mooching through those clamorous throngs, but for the occasional buzz they take some beating.

PBO Ask the experts

Got a question? Email pbo@timeinc.com

Here's just a selection of the latest questions from PBO readers. Email or write to the address on page 5 and our experts will answer your queries

ELECTRICS

Briefly losing the plotter

Q I replaced my Garmin GPS152 with a Garmin 750 chart plotter, but didn't change the wiring for the 12V DC supply. When first starting the engine I use battery 1, switch to 1+ 2 and then to 2 only when sailing. However, I find that when I subsequently start the engine, eg when entering a marina (normally on battery 2), the 750 chart plotter switches itself off whereas the GPS 152 did not. This is more of a nuisance than a big issue as all I then do is restart the chart plotter. However, is there any change I can make to the DC supply to stop this happening? I'm guessing that there is a surge of current on starting and that the chart plotter has built-in protection.

Steve Jones
Fareham

Steve Jones' chart plotter switches itself off when he restarts his boat's engine

PAUL HOLLAND REPLIES:

I suspect that the voltage on your battery dips when the engine is cranked to a level that causes the plotter to drop out. There are a couple of possible solutions: firstly, you could invest in a diode combiner. These units take supplies from two batteries and combine them to deliver power to a single output (in this case your plotter). The battery with the highest voltage delivers the power.

While this would solve the problem, it would mean that the plotter – if left on – would draw power from both batteries, meaning that you lose the benefit of having one battery isolated for engine starting.

Alternatively, a 12V to 12V DC-DC converter could help. This will boost the lower battery voltage (up to a point) as well as having some energy storage within the unit that will allow it to ride through a short dip in voltage. However, success on this is not guaranteed – albeit likely!

ENGINES

Prop for a Seaworker

Q I have a 1974 Colvic Seaworker with a Yanmar YSE 12 diesel engine, and after a three-year restoration of the hull, engine, wheelhouse and cabin, my last problem is to determine the propeller size. The one fitted at present is 12in, but the Yanmar manual says the size should be either 15in x 10in, 14in x 9in, or 13in x 8½in. What size propeller would be the best to suit the engine and gearbox?

Ron Clayton
Largs, Scotland

PAT MANLEY REPLIES:

Assuming that your Seaworker has a displacement of about 2.75 tons and a waterline length of 5.8m (19ft), my software comes up with a three-blade prop size of 14in x 8in, and gives a speed of 5.8 knots. Your 12in prop is a bit undersized, but it may be worth staying with this until you see what performance you get. If the engine happens to be down on power, a 12in prop may turn out to be correct. The downside is that you will need to haul the boat out to change the prop if needs be.

Ron Clayton has been restoring a Colvic Seaworker 22 similar to this

PAINT AND ANTIFOULING

Spotted deck

Q We have a 10-year-old Aquanaut of steel construction. I have noticed some very small, pinhead-sized spots of rust on the deck, mainly on the toerails. The boat is in great overall condition, and I am keen to cure this problem at this stage. Can you please advise on the best way of dealing with this? Love the magazine!

Brian Penman
By email

RICHARD JERRAM REPLIES:

Being Dutch-built, your Aquanaut will probably have been painted with two-component products. We refer to these products as high-performance, as opposed to a conventional scheme when single-component products are used. If this is the case, I would encourage you to use high-performance products for the repair. This avoids mixing the schemes and keeps all painted areas uniform.

Basically, you will need three products: an epoxy primer, a two-component polyurethane undercoat and a two-component finish. You may also require a small amount of epoxy filler to dress the repaired area between coats of primer.

Firstly, you'll need to remove the spots of rust. This can be achieved using a small abrasive wheel to expose bare metal. You then need to spot-prime the exposed metal with a minimum four coats of epoxy primer, overlapping slightly onto the existing paintwork. If you require any filler, do this between the coats of primer to fair the surface.

Next, spot the areas in with two coats of undercoat to cover the primer. Finally, apply two coats of the finish. To keep a uniform colour, this may necessitate painting the complete area that has been repaired. Gloss can be applied over existing gloss after first abrading with a 240-grade abrasive and removing all sanding debris. Ensure all areas are grease- and wax-free before painting. It may be advisable to contact Aquanaut to clarify which product types and colour of finish were used.

ENGINES

Heavy engineering has had its day

Could the 'leaking contrivance' on Ray Eccles' Moody 37 be a heat exchanger or an early form of syphon break?

Q I own a Moody 37 motor-sailer, a Fred Parker design built in wood in 1963, and for the last 15 years or so I have been involved in her restoration. She has twin Perkins 6.305 engines. Ashore in Totnes, we connected the hose to supply water and started up the port engine when we heard the sound of gushing water coming from behind the panelling. Removal of an inspection panel revealed the leaking contrivance pictured. Does anyone know what this is, what it does and who made it? And as it is no longer fit for purpose, can you suggest its modern alternative?

It measures approximately 13in x 11in x 5in and is of heavy cast iron construction. It has 2½in-diameter inlet and outlet ports, with a ½in vent directly overboard and a 1in copper pipe falling back into the water system. In the casting, the letters YC GB seem to be the only identifying marks. I have searched the internet for answers, but have drawn a complete blank.

Ray Eccles
By email

PAT MANLEY REPLIES:

In your description you say that one pipe vents overboard and the other falls back into the water system, but you don't say which water system. If it goes back into the domestic water system, then my thought is it's probably a heat exchanger to heat your domestic hot water when the engine is running. If it is connected to the engine cooling water system then it could be an early form of syphon break, to prevent seawater being siphoned into the exhaust pipe and flooding the exhaust (and engine) when the engine is stopped. If the starboard engine is running correctly and has the same system, I suspect that you should see some water flowing (or trickling) from its similar outlet on the other side of the hull when the engine is running.

SURVEY AND CORROSION

Can you assess my boat rudder's state of play?

Q There are signs of osmosis down the trailing edge of the rudder on my 2002 Dufour 36 Classic, where the cross-section is the thinnest. Can I ignore it or should I grind out the blisters, dry them out then fill and fair, or strip the gelcoat off the whole rudder, dry it out and then epoxy it?

Also, there has always been some play in the lower 'self-aligning' rudder bearing, but it has become slightly more pronounced over the years. There is now about 5mm deflection of the rudder at its lower tip, causing the rudder to 'chatter' when opening the throttle from a standstill until laminar flow of water is established. More recently, the steering has got stiffer when heeled over, although it is fine otherwise when not loaded up. Various boatyards have said the play is within normal limits and replacing the bearings may not help, while others have suggested that the stiffness could be remedied by cleaning the bearings and rudder stock and greasing them. Have you any thoughts on this, and how easy is it to extract the bearings?

Andrew Spruell, Hampshire

COLIN BROWN REPLIES:

Have you opened any of the blisters? If they contain a fluid which smells of vinegar and have loose glass fibres at their base, they are probably worth repairing. Modern resins are pretty good at resisting water penetration so there may be a local defect in the rudder. If the blisters are only in the coatings and do not reach into the laminate then you should be safe to fill and fair them.

At the lower edge of a spade rudder, 5mm play is within normal limits. If the problem becomes irritating new bearings may be required, but the play may not altogether disappear as bearings with plastic components are often made to allow for swelling.

Stiffness in rudder bearings can be caused by wear and swelling of the bearing materials as well as dirt and grease build-up. Cleaning the bearings and rudder stock may help, but you should not grease the bearings. The play and stiffness may both be caused by wear in the rudder bearings. Self-aligning bearings often have a plastic doughnut that can be rotated and removed for replacement. A Dufour dealer should be able to tell you who made the bearings so you can order replacements.

THE PBO EXPERTS

To ask a question email pbo@timeinc.com and include your address. Pictures are helpful

SEA SAFETY
Will Stephens is Staff Officer Operations (Coastal Safety) at the RNLI

BOAT BUYING
David Harding is a regular contributor to PBO: his photo archive is at www.sailingscenes.co.uk

CRUISING
Stuart Carruthers is the RYA Cruising Manager and has sailed extensively

SAILS
Ian Brown of the International OneSails loft group is an expert on sails

MASTS & RIGS
Mike Coates worked in the spar and rigging business for many years

SURVEY AND CORROSION
Colin Brown runs a marine survey and consultancy company, CB Marine Services

ELECTRICS
Paul Holland is chairman of the BMEA and MD of Energy Solutions (UK)

ENGINES
Pat Manley is a diesel engine course instructor and marine author

PAINT AND ANTIFOULING

Even the thick-skinned can be affected

www.bonwitco-boatbuilders.co.uk

Bonwitco boats such as this one have a sturdy double-skinned construction

Q My small Bonwitco dinghy has recently been taking water on board into the cavity between its two skins, and now has to be routinely emptied by upending it and draining the water out. The water ingress is almost certainly through small abrasions in the hull brought about by 17 years of pulling it up the beach/shingle on our many trips around the River Dart. Is there a paint/coating that I can use on the hull to prevent this? An epoxy coat, perhaps: if so, does this have to be protected from UV?

Jim Heyes
By email

RICHARD JERRAM REPLIES:

With the amount of water entering, the indications are that there are some small fractures in the hull. These may be so small that they are difficult to detect, but they will almost certainly appear as hairline cracks in the gelcoat. As the Bonwitco is double-skinned, this does mean that to effect a repair will involve more work than a single-skin construction. Unfortunately, paint is not going to solve this problem. I think it may be advisable to speak to Wills Marine in Kingsbridge in South Devon (tel: 01548 852424), the manufacturers of the Bonwitco, as they will be able to recommend a repair procedure.

WOOD

Only proper ply need apply

Q I have an 11.6m (38ft) wooden motor launch which has a marine plywood afterdeck. Six months ago, I noticed two areas had started to delaminate. These were renewed with marine ply from my local builders' merchant, but unfortunately these have also started to delaminate. Can you please advise me on what to use to seal the edges of the plywood, and can it be painted over?

David Anderson
By email

RICHARD HARE REPLIES:

If your new plywood is delaminating, it is already unsuitable for use. I'm surprised that a builders' merchant supplied marine-grade plywood. Check to see if there is a ply mill stamp on each board that claims compliance with a recognised marine-grade plywood standard: in my experience, builders' merchants offer WBP tropical hardwood plywood or exterior softwood plywood.

Both marine grade and WBP tropical hardwood plywood use WBP glues, never moisture resistant glues. However, marine-grade plywood will only use timber species of higher natural durability (Classes 1-3). Historically, and probably still to date, the only permissible exception was the use of Gaboon (Okoume) where weight is a particular requirement, such as for racing dinghies.

Marine plywood also has tighter restrictions on core gaps to the extent that they are nearly eliminated altogether.

Poor quality plywood such as this usually has lots of core gaps. In marine ply they are nearly eliminated

To be honest, and I know this isn't what you want to hear, edge-sealing won't make any difference in your case: your plywood has failed you already. If the boards aren't stamped with a claim to compliance, and it was sold to you as 'marine', I would have thought you have a good right to compensation from your supplier.

The best option is to bite the bullet, source fresh plywood from a different supplier and perhaps not from a builders' merchant unless it can offer you quality assurance. I sometimes use WBP tropical hardwood plywood from my local builders' merchant. In your case, I'd have a chat with Richard Bagnall at Robbins Timber, a company that specialises in the leisure marine market.

As to edge-sealing, if you are covering sound plywood with an epoxy or GRP mat, then apply a coat of epoxy or polyester resin around the edges before the mat is laminated onto the plywood. Don't use varnish as polyester and epoxy probably won't bond to it well.

50 of the most frequently asked boating questions are answered by our experts on the PBO website. Visit www.pbo.co.uk

GAS FITTINGS
Peter Spreadborough, of Southampton Calor Gas Centre, has 20 years in the industry

PAINT AND ANTIFOULING
Richard Jerram is former UK technical manager of International Paint

YACHT DESIGN
Andrew Blyth is a naval architect with interest in stability and buoyancy

TOILETS AND PLUMBING
Gary Sutcliffe of Lee Sanitation knows about holding tanks, toilets and plumbing

TRAILER-SAILING
Colin Haines is a design engineer who has trailer-sailed for 25 years

ELECTRONICS
Chris Ellery of Greenham-Regis Electronics is a former Merchant Navy officer

BOATBUILDING
Tony Davies has been building and repairing wooden, GRP and steel boats for 40 years

WOOD
Richard Hare is a wood technologist and long-time wooden-boat owner

Haber 34: the boat that sails by computer

A shoal-draught cruising yacht that holds her course in any conditions and on all points of sail with no help from an autopilot or windvane? It really does exist – as David Harding reports

All sorts of things have happened in yacht design over the past few years. Catamarans with rigid wing sails fly around on foils. Racing monohulls have sprouted canting keels, horizontal daggerboards, carbon-fibre bowsprits and giant asymmetric spinnakers that allow them to plane downwind at speeds undreamed of by sailors from earlier generations.

And cruising yachts? Well, they've grown a bit higher and wider, their ends have become shorter and their keels sometimes have bulbs on the bottom – but, in terms of the headlines, that's about it. Sounds a bit boring by comparison.

This gradual evolution in cruising-yacht design is only to be expected in a sector of the boating world that's conservative for good reason. It doesn't mean that designers and builders haven't been coming up with good ideas, great designs or inspiring combinations of features, because they have. What it does mean is that it might be a few years before a wing-sailed, 33ft foiling catamaran or a planing monohull with water ballast and a canting keel takes over the centre ground from the likes of the Bavaria 33. By the time that happens, maybe foils and wing sails will be considered old hat anyway. Who knows?

In the meantime, if you want to see one of the more interesting and potentially practical new ideas to be incorporated into a cruising yacht, have a look at the Haber 34C4 (Haber being pronounced Harber – let's get that right straight away). Here's a deck-saloon cruiser with four computer-controlled centerboards that are raised and lowered automatically to keep her on a constant course relative to the wind. Since this is the real world, they can also be controlled manually, or electrically via a touch-screen.

Does that perhaps sound a little far-fetched? After all, if you want a boat to steer herself, what's wrong with an autopilot or windvane self-steering? That's what most people use, because those are about the only ways of getting a boat to sail herself for prolonged periods unless you have one that's blessed with remarkable directional stability or kept on track by an alternative such as a sheet-to-tiller arrangement.

Achieving balance

For most people and most boats, a windvane or autopilot is a perfectly good solution – as far as it goes. But Janusz Konkol – an innovative and free-thinking sailor, designer, engineer and boatbuilder from Poland – doesn't see either of them as the answer because, in his view, they're having to compensate for imbalances that are a natural characteristic of a sailing yacht.

Every sailor worth his or her salt knows that a boat's balance changes according to a host of inter-related factors including point of sail, wind strength, sea state, sail plan, sail trim and, most importantly, angle of heel. These changes in balance result in a turning moment one way or the other: most of the time the boat is trying either to round up or to bear away. The helmsman compensates by turning the wheel or moving the tiller accordingly, angling the rudder to force the boat to go the way he wants – effectively against its will. Any given boat will need a very particular combination of sail trim and heel angle to achieve perfect balance and hold her course with the helm unattended.

In a way, rudders are a necessary evil, because every movement slows the boat down by presenting the blade at an angle to the water flow. Beyond a certain angle – either of heel or to the centreline – a rudder will stop working anyway.

Of course, it's faster to steer vigorously to avoid a broach or to get surfing or, going upwind, to save slamming into a steep wave, but in a way it's like turning the wheel in a car: when the tyres are no longer in line, you're burning rubber and increasing friction.

There's also a big difference between helming for speed, as it were – playing the waves or

The sail plan works well goose-winged on a run

She's a chunky boat, but the Haber 34C4 can get a move on

responding to a shift – and playing tug-of-war with the helm to keep the boat on course. If constant weather helm means you're dragging the rudder sideways through the water to stop the boat rounding up, something's wrong. Perhaps you're simply heeling too far, or it might be a case of too much power in the mainsail in relation to the headsail resulting from any number of sail-trim factors. Then again, that extra chain you added to the anchor might have moved the CLR (centre of lateral resistance) further forward by inducing bow-down trim. It can make a difference.

Many elements have a part to play, and the question of how they relate to each other and how they affect your day-to-day sailing is one that we have addressed within these pages on many occasions. If you fancy a refresher, have a look at 'Curing lee helm' (PBO April 2006) and our Boat Skills series (November 2008 to January 2009).

After that – or, ideally, before – get in a dinghy and go sailing. Remove the rudder and tack and gybe your way around a triangular course without it. Sail backwards. Sail upwind without the centreboard. Make the boat perform pirouettes and handstands. Go out when it's blowing old boots, then go racing, get to the top of your club fleet, give the big guns in your class a few scares in open meetings or national events, and do some team-racing or match-racing. This way you will develop an instinctive feel for the balance and dynamics of sailing for which there is simply no substitute.

Whatever and wherever you sail, you will become a better sailor for this seat-of-the-pants experience. And getting to grips with some of the theory is no bad thing either. Should all this be more than you have time for this afternoon, however, or right now you're more interested in learning what this Polish boat with four centreboards is all about, then just keep reading.

Better with boards?

For Janusz Konkol, achieving balance in a cruising yacht is all about safety and comfort: reducing the load on both the rudder and the crew, and creating a boat with an easier motion that will also be better able to cope with heavy weather. Maintaining a constant course helps the sails to work more efficiently, too, contributing to greater speed.

Unfortunate things do happen in extreme conditions. A boat can be broached by steep following seas, a serious broach potentially leading to a man overboard, a knockdown, or an inversion and possible dismasting.

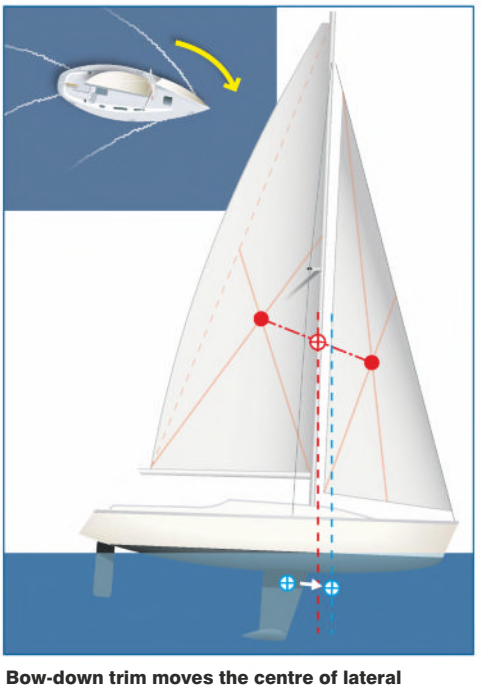
Keels can fall off, whereupon a boat will roll over and quite possibly sink. Rudders break, leading to loss of control and, in some instances, to water entering the hull. Halyards can fail or sails tear, whereupon a boat might be compromised by a sail plan that upsets her balance and makes her hard to handle or to sail efficiently. Despite their lower centre of gravity, boats with deep fin keels are more prone to being knocked down by a breaking wave than are shallow-draught alternatives that can slide sideways instead (assuming the latter are properly ballasted).

Thankfully these sort of incidents are relatively rare – but they're not unknown. Many of us have friends or acquaintances with first-hand experience of such things. I know people from two crews who have been airlifted from their yachts in mid-Atlantic following keel bolt failure. Two people I knew have lost their lives at sea in heavy weather, also in the North Atlantic.

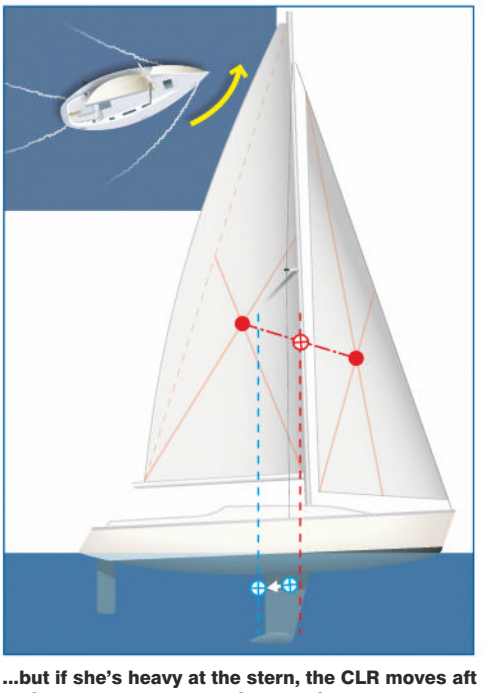
On a less dramatic level, I lived through a particularly unfriendly gale in Biscay on a 30ft trimaran that got us through unscathed. A deep-keeled monohull of similar size in the same area was rolled through 360° and limped into Madeira some time after us with a broken spreader – a lucky escape.

Such things can and do happen, but Janusz Konkol is devoting his working life to the creation of boats that minimise the risks as well as offering practical advantages for everyday sailing. Janusz has decades of racing and cruising experience in the Baltic – a stretch of water not known for its benign nature. He spent many years racing quarter-tonners, surviving some pretty extreme conditions during passage races and becoming aware of ways in which yachts can make life difficult or

Fore-and-aft trim can turn the boat



Bow-down trim moves the centre of lateral resistance (CLR) forward and the boat rounds up...



...but if she's heavy at the stern, the CLR moves aft and can encourage a tendency to bear away

Shifting centres: board control

All boards down: the bow board, main board and two at the stern

Downwind, lifting the bow and main boards moves the CLR aft

Upwind under just a storm jib, the CLR can be moved forward

dangerous for their crews. These included their propensity to broach downwind, to be knocked down by steep seas and to be hard or impossible to sail upwind under seriously reduced canvas, such as a storm jib on its own.

One of the biggest problems, he realised, is that the crew has no control over the boat's centre of lateral resistance (CLR), other than that effected by heel or fore-and-aft trim. By contrast, the rig's centre of effort (CE) moves forward or aft according to the sail plan, sail trim, point of sail and other factors, so it's little wonder that a state of imbalance is the norm. Surely the logical approach, figured Janusz, is to develop a way of shifting the CLR forward and aft as well?

Safety downwind

His project started with the fitting of twin retractable (external) boards to the stern of some relatively small designs with conventional centreboards. Moving the CLR aft by raising the main board and dropping the stern boards allowed the boat to pivot from a point further aft, becoming directionally more stable and less prone to broaching in a following sea.

It's a simple concept and it worked. Trials showed it was even possible to maintain a course, without anyone at the helm, under bare poles dead downwind or, in heavier weather when you don't want to be dead downwind, on a broad reach. Most boats lie with the wind on the beam (plus or minus a few degrees) if left to their own devices, which is one reason for the towing of warps or the use of drogues or sea anchors. There will always be situations when drogues or sea anchors will be needed – to maintain sea-room, for example – but having a boat that will steer herself and behave well in following seas rather than demanding constant attention at the helm is no small deal.

I can vouch for the fact that hand-steering a small boat for hours on end, at night, after two days of a full gale, listening for the roar of a breaking crest over your shoulder, fearful of the consequences of a broach and bracing yourself to make sure the tiller doesn't pull you across the cockpit is not a relaxing or enjoyable experience, especially when there are only two of you on board. In those conditions, most autopilots just couldn't cope.

For Janusz, the combination of stern boards and a centreboard pretty well sorted the downwind issues. Next he turned his attention to upwind sailing in heavy weather. There can come a time when you have to reduce sail to a storm jib and trysail – or perhaps just a storm jib. He's been there and done that.

The trouble with trying to make upwind in strong winds and heavy seas with only a storm jib is that the bow is in prone to being knocked off by the waves, making it hard to regain enough speed to establish steerageway and generate the lift from the keel necessary for clawing your way to windward. Sometimes the only answer is to use a heavily-reefed mainsail or a trysail as well, which is more canvas than you need and gives you more speed than you want. The result is that you crash into, through and off the waves harder and faster than is good for either the boat or the crew.

That's when you need a bow board. With just the storm jib, the rig's CE has shifted forward. So you raise the stern boards as much as necessary, partially raise the centreboard and lower the bow board to move the CLR forward. Balance is restored, the bow is no longer knocked off and you can continue to make upwind at a gentler pace.

Such a configuration might also be necessary if you have lost or broken the main halyard, for example, or damaged the mainsail. It increases your options.

With a centreboard, two stern boards (one each side, windward/leeward) and a bow board the CLR can be shifted wherever it's needed to achieve balance.

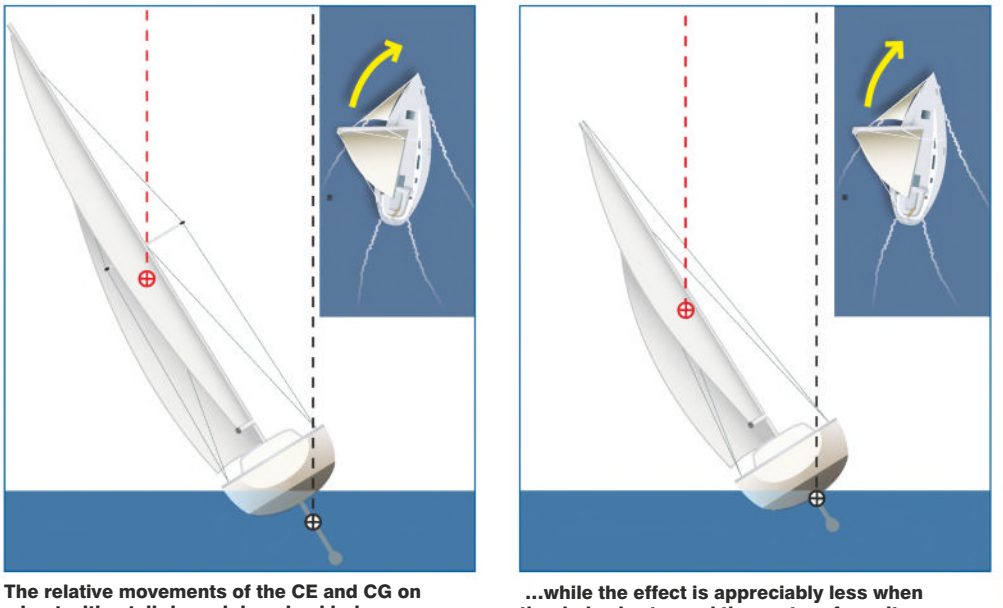
We introduced the concept in PBO November 2009, after I had sailed a Haber 800C4 with Janusz from one side of the IJsselmeer to the other without touching the tiller.

Getting bigger

The Haber 800 is a 26-footer with a deck saloon to offer all-round visibility from down below, shelter in the cockpit, plenty to hold on to when moving forward on deck and, importantly, a positive righting moment all the way to 180°. She also has what Janusz calls the Huari gaff rig – a sort of high-peaked hybrid between a gaff and a gunter that uses a single halyard. It keeps the main mast short, so no spreaders are needed, and means the height of the rig is reduced when the sail is reefed or the mainsail lowered altogether in heavy weather: less weight and windage aloft. Shallow draught and easy mast-lowering make her well suited to inland waters as well as to offshore sailing.

Not surprisingly, her big sister follows the same theme. She

Moving moments: the long and the short of it



The relative movements of the CE and CG on a boat with a tall rig and deep keel induce a substantial rounding-up moment...

...while the effect is appreciably less when the rig is shorter and the centre of gravity is higher

Here the boat is sailing along happily with the rudder fully raised

In one easy move, Janusz initiates a tack

spreads her canvas fore-and-aft instead of vertically which, points out Janusz, keeps the rig's centre of effort closer to the centre of gravity when the boat heels, thereby reducing the rounding-up moment and the relative differences in balance between a boat that's heeled and one that's upright. Internal ballast helps in that respect, too.

The effect of heel on a boat's course is something that many sailors underestimate. Wherever the rig's centre of effort because of the sail trim, if a boat is heeling too far it will usually win the battle with the helmsman.

On the 800, you adjust the boards manually, using control lines on the bow and centre boards and rotating handles on the stern boards (as in fully manual mode with the 34C4). The big development with the new boat is not only the option of electrical control via a touch-screen that shows the position of each board, but also the use of a computer program that allows you to go a step further by making the adjustment of the boards fully automatic. When automatic mode is selected, the program raises and lowers the boards to keep the boat on a course relative to the apparent wind. You enter the wind angle you want, trim the sails accordingly and the system does the rest. Watching the screen, you see each board going up or down according to whether the boat is sailing too high or too low.

At the moment the automatic system can't be used in conjunction with an autopilot to maintain a compass course; that's something Janusz has in mind for future development. In the meantime, there's no reason why the boards can't be controlled in manual or semi-manual (electric) mode and used with a conventional autopilot. Anything that improves a boat's directional stability will reduce the load on the helm and make an autopilot's life easier, allowing it to continue working in conditions when it couldn't otherwise.

During my three days of testing in the Gulf of Gdansk – which involved some night sailing too – Janusz's programming team was on board, using the time to refine the software. Every deviation from course and every movement of every board, together with the wind strength and angle, was recorded and adjustments were made if necessary to improve the response in certain situations.

It's clear from the wake that she's turning at a good speed...

...and the tack is complete. A video of this is on Haber Yachts' website

Nerve centre: the controls for raising and lowering the boards. Systems for manual operation are fully independent from those used in automatic and electrical modes, to provide a complete back-up

The big question, of course, is does it work? The simple answer to that is yes, it does. It's not yet perfect – it struggles very occasionally in fluky and changeable conditions – but most of the time it's impressive. On our first afternoon, in about 15 knots of wind, we set off on a broad reach with the bow and main (centre) boards up, experimenting with combinations of rudder and stern boards. The rudder isn't used for steering unless you're actively helming the boat. It's locked in a central position, or offset a few degrees if necessary, to provide extra area at the stern and help move the CLR further aft. In some situations – mostly in light airs – it can be raised entirely. Janusz's party trick is to tack without using the rudder. We did that several times. (How? Answers on a postcard, please).

Later that evening we had the boat sailing for lengthy periods in fully-automatic mode, holding a course to within 2-3° with 17-18 knots of wind on the beam. After dark the wind increased, gusting up to 35 knots. Still

under jib and full mainsail, and with our angle of heel never exceeding around 25°, we carried on with the system still keeping us on track to within a few degrees.

Balancing the boards

The best way to understand how the system of board-balance works is to sail in fully manual mode, as I tried off Gdynia on the evening of our second day. Set the boat up on any course you choose, trim the sails appropriately, see whether you're carrying weather helm or lee helm, then tweak the boards. If the boat wants to round up, move the CLR aft by lifting the bow board and lowering one or both of the stern boards all or part of the way. If she wants to bear away, lower the bow board and (partially) raise one or both of the stern boards.

Upwind in a breeze you will progressively raise the main board until, in a full gale or more, it's all the way up and you're using just bow and stern boards. This is exactly what the system does for you when you engage auto mode.

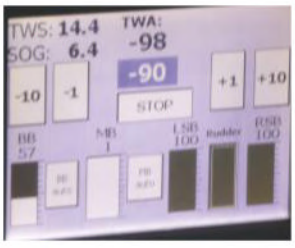
On the last day, in 25 to 30 knots from a more onshore direction that kicked up an appreciable sea, we headed over towards the Hel peninsula. We beat, we ran and finally we reached home from the town of Hel to the Wisła Miała (how many people can honestly say they've been to Hel and back?).

Janusz makes the point that, in fresher winds with the main board mostly or fully raised, the boat is subject to much less tripping movement than a boat with a deep keel. The result is a smoother motion, with the boat rolling less as each wave passes under the hull. She will need to be sailed a few degrees higher to compensate for the extra leeway, but the yawing, rolling and even the amount of spray finding its way on deck are all less than you would expect. Boat speed can be improved, too, because a constant course ensures that optimum sail trim is maintained. If you're yawing through 20° or more, the sails will be wrongly trimmed much of the time unless the crew is working flat out. We maintained a regular 6-7 knots, which is perfectly respectable for a chunky 34-footer.

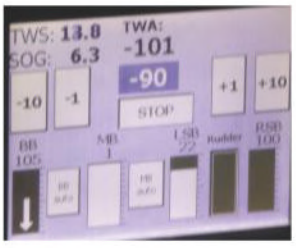
Here's the touch-screen display and control unit inside the companionway

Even in variable conditions the C4 system copes better than many conventional alternatives. On one occasion we were on a fetch in a wind of over 30 knots which, within a couple of minutes, dropped to 12-14 knots. After a little whirring of winches to adjust the boards, the boat carried on as though nothing had happened. Even when, on another day, Janusz provoked the system by suddenly lowering and then raising the rudder (thereby moving the CLR), the aft boards responded and deviation from course was minimal.

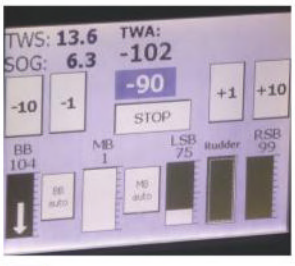
How wind strength affects a boat's steering – and how the centreboards respond



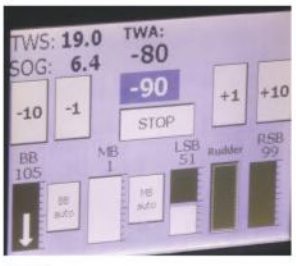
1 **The boat has been sailing in a wind of 18-20 knots with the main board raised, both stern boards fully down (LSB is 'left' stern board; RSB is 'right' stern board) and 57% of the bow board down. A lull in the wind (it has dropped to 14.4 knots) allows the boat to dip 8° below her course**



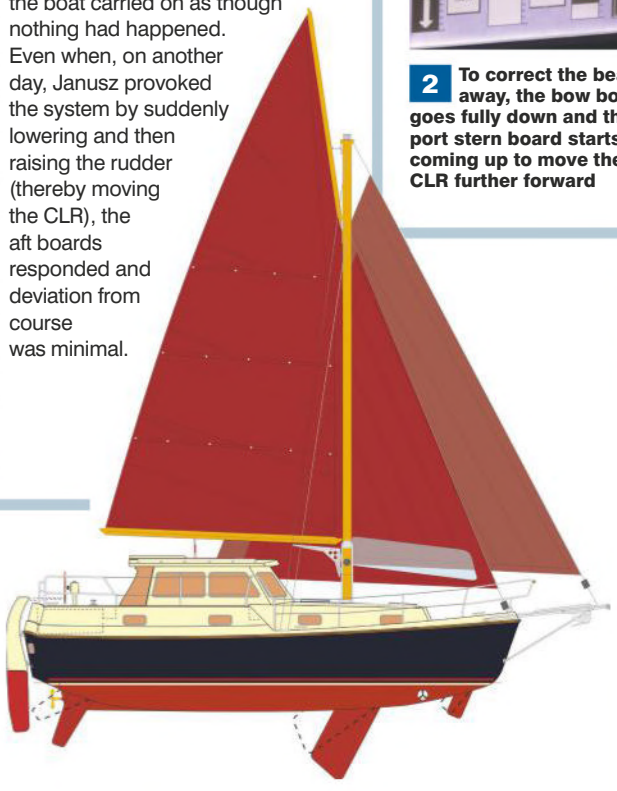
3 **The port stern board comes most of the way up as the bow board stays down, helping her to start heading back up. Now, however, the wind has just started to pick up again, which acts to increase the rounding-up moment. Gusty winds are testing, because they affect heel and, therefore, balance**

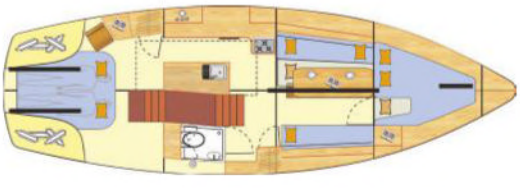


2 **To correct the bearing away, the bow board goes fully down and the port stern board starts coming up to move the CLR further forward**



4 **Because of the extra wind, the boat is now slightly above her course, so the port stern board goes down again to help her bear away closer to the programmed angle**





Tech spec

Haber 34C4

Price: from £206,000
Length including bowsprit: 12.50m (41ft 0in)
LOA: 10.50m (34ft 5in)
LWL: 9.40m (30ft 10in)
Beam: 3.65m (12ft 0in)
Draught: – centreboards down 2.20m (7ft 3in)
– centreboards up 0.70m (2ft 4in)
Displacement: 10,200kg (22,487lb)
Ballast: 3,000kg (6,613lb)
Sail area: (main & genoa) 65sq m (700sq ft)
Displacement/length ratio: 343
Sail area/displacement ratio: 14.0
RCD category: A
Engine: Yanmar 39hp
Designer: Janusz Konkol
Builder: Haber Yachts, www.haber-yachts.com

PBO verdict

The Haber 34C4 is an interesting and unusual boat that would be interesting and unusual even without the computer-controlled multiple centreboards. She's designed, engineered and built by Janusz and his team at a yard that not only builds boats – in glassfibre, composites, wood and aluminium – but also makes components in any material you care to name. Yards for the 360ft square-rigger, *Star Clipper*? No problem. Add some aluminium tenders to the order while you're at it, and don't forget the wooden blocks. As for the Haber 34, whether or not the concept of this particular boat appeals to you, the principles that Janusz is addressing in her design are of direct relevance to everyone who sails.

International

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Exhausting modifications

PBO PROJECT BOAT

Before bolting the engine in place, it seemed prudent first to route the exhaust hose and fit the fuel system. David Pugh reports

Siting the water trap in the starboard cockpit locker, which drains to the bilge, meant we could pass the exhaust hose through an existing gap into the void beneath the cockpit floor and forward to the engine

Last month, we finished glassing in the bearers for *Hantu Biru*'s inboard engine. The next steps, we thought, would be to bolt the engine in place and carry out a final shaft alignment, but with due consideration decided that it would make far more sense to fit all the ancillaries first. After all, complex routeing of control cables and of fuel, exhaust and cooling hoses are much easier when you're not bashing your head and knuckles on an engine block!

The exhaust

We fitted the transom skin fitting for the exhaust some time ago to fill the hole left by the old one, but at the time simply capped it off. The first challenge was to remove the cap – it's amazing how seized a bronze thread can become after just a few months in salt water – but fortunately with the aid of some heat we were able to free it. A 1½in hose tail screwed to the skin fitting made it ready to accept the new hose.

Routeing the new hose was not a job to which we were looking forward. The after part of the bilge under the cockpit floor is shallow and inaccessible, but we found that if we sited the water trap in the starboard cockpit locker, which drains to the bilge, we could pass the hose through an existing gap into the void beneath the cockpit floor and forward to the engine. Thanks to hot weather aiding the flexibility of the hose, the plan worked well.

A length of webbing holds the water trap in place

We bonded two hardwood blocks to the inner face of the cockpit locker and fitted a length of webbing between them to hold the water trap in place. The trap is the original one which came with the engine – when we tested the engine it worked perfectly, so we saw no reason to change it. The hose runs from the engine space aft into the locker and onto the trap, then from the trap to the skin fitting via a swan neck, as high as we could make it to avoid the possibility of water entering the water lock if the skin fitting submerges under sail. The hose enters the engine space on the wrong side for the exhaust manifold, so we have left extra length to allow us to cross the space aft of the engine.

Fitting the fuel tank

On a sailing boat, the fuel tank is more a necessary evil than a welcome guest. It's potentially heavy and almost invariably located towards the stern of the boat, just where you don't want extra weight.

After much pondering, we decided the best place for the tank on *Hantu Biru* was at the forward end of the port cockpit locker. As the engine is small it should not need a large tank, and the smallest plastic tank made by Vetus, their 25lt model, looked like it might work. Careful measurement removed some (but not all) of the doubt – the fit was down to whether the tank's rounded corners would accommodate the hull curve. Fortunately, it fitted perfectly, filling nearly all the space and losing relatively little locker storage, while keeping the weight as far forward

The 25lt fuel tank fits perfectly into the forward end of the port cockpit locker

as we could manage without having the fuel tank in the cabin.

The tank comes with webbing straps to secure it, which locate into moulded ridges. To avoid having any fittings which could chafe the plastic, we cut slots in the forward bulkhead of the locker, passing the straps through into the cabin and fastening them with stitched buckles. This has provided a firm fixing, but we plan to seal the lower slots to prevent any water from the locker entering the port berth's trotterbox.

The securing straps pass through slots into the port trotterbox

Fitting the fuel filler

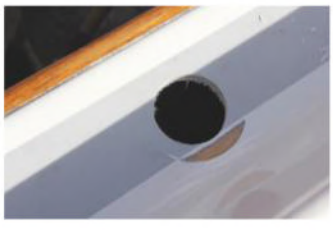
With the tank in position we could work out where the filler would need to be sited. The tank's filling point sits neatly below *Hantu Biru*'s side deck, so by extending the angle of the filler stub we could approximate the position of the filler on the deck. We transferred this to the outside by drilling up from below with a small pilot drill.

Using a small drill gave us the chance to move the hole if necessary, but it proved to be in a sensible place on the deck. The only problem was that the inner edge of the fitting's flange was in contact with the point where the deck starts to curve up to meet the cockpit coaming.

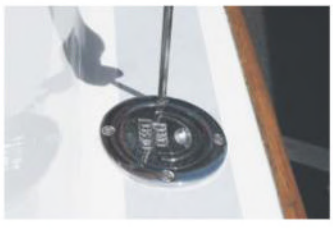
To solve this, we used a hole saw of the same diameter as the flange to cut a groove in the curved section down to the level of the side deck. We then used a smaller hole saw to cut the hole for the fitting. A sharp chisel then pared away the glassfibre up to the groove to leave a flat surface onto which the filler fitted neatly with bolts and sealant.

1 A large hole saw cut a groove the diameter of the filler flange in the curved deck

2 We then cut the fitting hole, and used a chisel to pare away the GRP up to the groove



3 The result was a flat surface onto which the filler's flange would sit neatly...



4 ...while not damaging any more of our glossy paint then strictly necessary!

Plumbing the tank

Like the exhaust, we decided to route the hoses before permanently fitting anything. To avoid cutting additional holes and allowing the otherwise sealed locker to drain into the cabin or bilge we chose to run the feed and return hoses under the cockpit floor from the engine space, right aft to the transom before rising to enter the locker at the top. This allows us to clip the pipes up under the deck and avoid cluttering the locker further. Passing the pipes aft was tricky, but fortunately 8mm fuel hose is stiff enough to push through gaps and we were able to reach the ends and pull them through.

With the hoses through, we plumbed them to the tank. The fittings on the tank are a simple design, with rubber inserts fitting into pre-drilled holes to accommodate the return and vent elbows. The dip pipe is similar, with a length of pipe supported by a wire insert added to the elbow before it is pushed through the rubber. As might be expected the fittings are tight, but water proved an adequate lubricant.

With the feed, return and vent hoses attached, we turned our attention to the filler hose. Hose of this diameter is always tricky, but having first clipped it to the tank stub and applied plenty of silicone lubricant spray we managed to push it up over the filler fitting and clip it in place. Once located the pipe provides another firm support for the tank, which we now strapped in position.

The tank fittings are secured by rubber grommets pushed through pre-drilled holes

Two 8mm bore hoses provide the feed and return; the vent is 16mm. All the hoses are double-clipped

The filler hose – working with hose of this diameter is always tricky

The vent fitting caused some head scratching, as it needs to be installed as high as possible but with room for a swan neck in the pipe to avoid water entering the tank. We eventually decided to fit it in the centre of the aft face of the cockpit coaming. This should stay fairly dry when sailing, will allow smells to vent overboard and, by fitting it low on the coaming, allowed space for a swan neck.

The final task in the locker was to tidy up the pipes, which we did using P-clips attached to the ends of the mooring cleat bolts.

The tank in position with all the hoses fitted and clipped under the deck. INSET The vent was fitted in the aft face of the cockpit coaming

Final tweaks

The fuel inlet is on the port side of the engine, so we fitted a Vetus combined water separator and filter to the port side of the engine space. The pipes are clipped to the side ready for fitting to the engine.

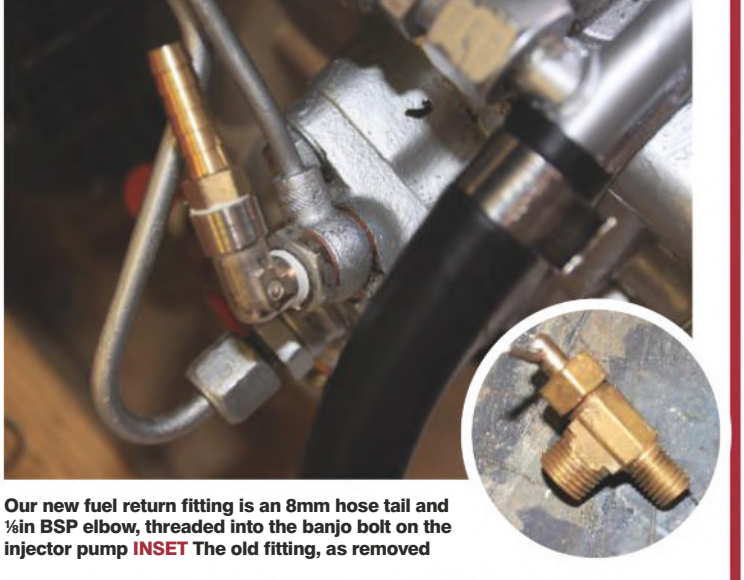
The return pipe will need to cross to the other side of the engine space when the engine is fitted, so we left plenty of length to allow for this. We also changed the fuel return fitting on the engine.

The old fitting was a small valve, threaded into the top of the banjo fitting on the injector return. This valve was almost completely clogged when we got the engine, and appeared to be a later addition – there is no evidence of such a valve in the manual, or in photos of other BMW D7 engines. It may be that it was what a previous owner had to hand, as the thread was a strange size.

To solve the problem we drilled out and retapped the banjo bolt to ⅛in BSP, adding an elbow and hose tail to fit straight to our 8mm fuel hose. We also had a new hose made up to take the fuel from the fuel pump to the injector pump, which we fitted with new copper washers on the banjos.

We fitted a Vetus combined water separator and filter to the port side of the engine space

At the same time, we also changed the coolant pipe from the water pump to the cylinder head, and the oil breather pipe. This involved removing the rocker box cover, so we set the tappets to avoid removing it again.



Our new fuel return fitting is an 8mm hose tail and ⅛in BSP elbow, threaded into the banjo bolt on the injector pump INSET The old fitting, as removed

We fitted a new hose and washers between the lift and injector pumps

We also fitted a new oil breather pipe between the rocker cover and head

Painting the engine

With *Hantu Biru* looking so presentable these days, it would be a shame if the engine's appearance didn't come up to the same standard. Ben Meakins addresses the situation

While *Hantu Biru*'s 'new' engine ran well, it didn't exactly look the part, with the grime from 10 years on a farm, oily stains and large areas of rust making it look more like something from a scrapyard than the engine for our shiny project boat.

Preparation for painting

1 I removed the alternator, brackets, air filter, water pump and injector, plugging their holes to avoid getting paint inside the engine. I made up a blanking plate from a plastic box lid to seal the crankshaft and bearings revealed by the removal of the water pump. I taped up and masked off the flywheel with a plastic bag to avoid getting paint inside the engine.

2 Now came the clean-up. For any paint to stick, we'd need to remove all the dirt, grime and grease. First, I used a citrus cleaner, which did a good job at cutting through the grease, and wiped this off with rags.

3 This done, I used a wire brush in a cordless drill to remove any dirt and flaky paint. I used a 'pencil'-type one for nooks and crannies and a flat 'disc' brush attachment for other areas.

4 With this done and the engine looking much cleaner already, I used brake disc cleaner, a powerful solvent, to remove any remaining grease prior to painting.

5 I used Kurust, a readily-available rust converter product, which was painted on to the rusty bits of the engine to neutralise the rust and prepare it for the paint.

6 I flattened some large cardboard boxes to build a temporary spray booth around the engine to contain any overspray from the paint cans.

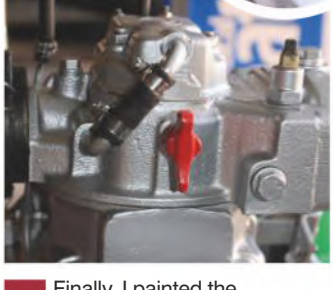
Applying the paint

Paint choice was tricky. Many of the paints available for painting engines are Very High Temperature paints, which rely on an engine's high running temperature to cure. That wasn't an option for us – our engine is likely to run quite cool, and won't be run up for a few weeks yet – so a paint that would cure at ambient temperature was a must. In the end, we went for Halfords engine paint in an aluminium silver colour.

1 With the engine split into two halves for ease of painting, I sprayed on the first coat. I applied a thin coat, keeping the can around 30cm away from the engine and keeping it moving from side to side.

2 Within 10 minutes, once the earlier coat was touch-dry, I sprayed on the next coat, keeping it light and thin to avoid runs. I then built up the paint in around six coats to ensure a good covering.

3 Twenty-four hours later, I was able to rotate the gearbox and roll the engine on its back in order to paint the bits that had previously been covered by the bench and supporting softwood.



4 Finally, I painted the decompression lever, fuel pump priming lever and cold-start button with red paint to aid identification in dingy light.

NEXT MONTH Cooling system, throttle and gearbox controls, shaft seal and engine installation

Folkboats and beyond

Peter K Poland looks at some of the most celebrated and influential Swedish cruiser/racers, many of which would make attractive second-hand bargains

Many fine yachts have emerged from Sweden. Robust and world-girdling cruisers and sleek high-performance offshore racing yachts have made their mark in international markets and carried happy sailors over many leagues – and Swedish craftsmanship has elevated most of these to the top of the table when it comes to quality and durability. But perhaps the most famous and influential of all Swedish yachts was a much more modest affair. It has been produced in prodigious quantities and sired scores of other successful designs. Tord Sundén's **Nordic Folkboat** is a sailing legend.

In the early 1940s, the Swedes set up an international competition, challenging designers to come up with a new sailboat class. The brief was simple; give us a cheap, fast, attractive and seaworthy One Design racing boat that will double up as a capable family cruiser. Around 60 designs were entered, but not one was deemed sufficiently good to be an outright winner. So the organisers commissioned amateur designer Tord Sundén to combine the best aspects of the top four designs into a single yacht. The result was the nautical equivalent of the Volkswagen (the people's car) and was named the Folkboat. No one ever imagined how successful this would be.

Today, about 70 years later, thousands of Folkboats – wooden and GRP – sail all over the world. And in addition to the classic One Design Nordic Folkboats, thousands of lookalike derivatives such as the **International Folkboat** (IF Boat), Contessa 26, Invicta et al have proliferated in different countries. Most have retained the Folkboat's celebrated sea-keeping qualities, handling, performance and good looks while increasing its interior accommodation space by adding a bit more beam, freeboard, waterline length or coachroof length and height.

The Nordic Folkboat was the nautical equivalent of the Volkswagen

The original design concept featured a counter stern, but this would have added to build costs so Sundén chopped it down, giving his Folkboat a jaunty transom stern. This was raked to balance the moderate bow overhang and the aft end of the keel was chopped back a smidge to provide a straight line on which to hang the rudder. The combination of this and the keel 'cutaway' forward reduced the wetted area while retaining efficiency and producing an undeniably pretty profile. The result was a sweet-handling hull that sailed superbly. A rounded underbody with slack bilges makes for initial tenderness, but after this the boat stiffens up dramatically (thanks also to a ballast ratio of over 50% and DLR of 249) and she sails happily under full sail while other yacht crews reach for their reefing lines. To this day, Nordic Folkboats win top-level events like Britain's largest yacht race, the Round the Island. If ever there was a timeless

ABOUT THE AUTHOR

Peter K Poland crossed the Atlantic in a 7.6m (25ft) Wind Elf in 1968 and later spent 30 years as co-owner of Hunter Boats. He is now a freelance journalist.

Folkboat variation in wood: available second-hand from £6,000

All pictures: Sailing Scenes

design, it's the Nordic Folkboat.

The early boats were all built of wood and feature clinker construction. This makes the hull light and strong and emphasises its good looks and sweet sheer. The **GRP Nordic Folkboats**, legalised in 1977, were exact copies right down to having wooden masts, and raced on equal footing with their wooden sisters. These GRP Nordic Folkboats are still built and have added around 1,000 boats to the traditional wooden fleets.

The Nordic Folkboat does not, however, win prizes in the accommodation stakes. A short, low coachroof and moderate hull dimensions contrast greatly with today's broad and bulky cruisers, and its standard non-self-draining cockpit – while snug and comfortable – means you'll need a cover when leaving her on a mooring and a bilge pump when sailing in heavy weather. Simple cabin settees, minimal headroom and limited locker space hardly offer liveaboard comfort, but this has not deterred adventurous sailors from crossing oceans – albeit often with modifications to the standard Nordic Folkboat format. Val Howells entered his Folkboat *Eira* in the 1960 Observer Single-handed Transatlantic Race and survived a serious knockdown, while the legendary Blondie Hasler came second to Sir Francis Chichester's 39-footer in his modified Folkboat *Jester*. Having experimented with a 'lapwing' rig in the '50s, Hasler converted her to junk rig before

Nordic Folkboat in GRP: available second-hand from £9,950

International Folkboat: available second-hand from £4,900

the OSTAR. It is said that he and *Jester* crossed the Atlantic 14 times.

What IFs

If you love the idea of a Nordic Folkboat's looks, performance and seaworthiness but are put off by its very limited accommodation, you do have another option. In 1966 Tord Sundén anticipated your dilemma and designed the International Folkboat One Design (the IF Boat); a new GRP variation that answered many of the cruising sailor's objections. Swedish builder Marieholm had a great run with this lovely little yacht, producing over 3,000. Compared to the Nordic Folkboat, it is a smidge longer overall (7.87m) and on the waterline (6.04m), weighs around 220kg more (2,150kg) and has more ballast (58% ratio). She also carries more sail, with a higher sail area/displacement ratio of 15.3, to improve light airs performance and has a self-draining cockpit for the rough stuff. And when the wind dies, you have an outboard (in a well or on the transom) or a small inboard motor.

Down below, you'll find plenty of teak and vinyl headlining. The forepeak offers two berths over

Marieholm 26: available second-hand from £9,900

1.8m/6ft long, and the main cabin has two even longer settee berths. Some boats have an enclosed heads compartment, and others are supplied with a portable loo. There's a rudimentary galley, a table, a small hanging locker and a few other lockers and shelves. Maximum headroom is 1.4m/4ft 8in so there's barely space to swing the proverbial cat. However, as Uffa Fox said, if you want to stand up you can always go on deck.

Several IF Boats have made it to the UK, and there's a large active fleet racing from St Mawes that holds its annual championship during Falmouth Week. However, others venture further afield. Len and Anne Careless said: '*Pele* spent last season on the River Vilaine and uses a lock to get to sea. Paying attention to pilotage here is necessary because of shallows, tides and rocks, but there is really quite something about sailing past U-boat pens; especially when flying an ensign.'

Len also summed up the IF Boat's appeal, telling me: 'I have owned my boat for 17 years. I was invited to crew on one and allowed to helm; and from that moment I was smitten. Being only 7.9m (26ft) in length it does not need a gorilla's strength to crew her. My wife and I both race and cruise her together, and yes, we have a spinnaker.

'She sails easily in very light winds and doesn't really need to reef until Force 6, when the genoa is often changed for a smaller jib. The helm is beautifully balanced throughout. In the same way that some cars can be called drivers' cars for the sheer pleasure of driving them, the Folkboat is very much a sailor's boat, and I have yet to meet a sailor who didn't appreciate sailing one.

'However, all boats are a compromise. The IF Boat has low freeboard and a long keel, which means she makes virtually no leeway even in strong winds. The trade-off is that she is a wet boat in a swell and does not have standing headroom below decks. I am 6ft 2in tall and am quite comfortable in her with a choice of three bunks that I fit, but the quarter berth suits someone shorter.

'My racing has been in Falmouth, where we race in class because it is the most fun to have One Design racing. Handicap racing is more of a lottery since wind and sea conditions affect different boats accordingly, so each boat can have its day. I remember one race fondly because after two hours of racing five boats finished within 20 seconds. Now that is fun.'

Bridget Macklin tells a similar tale. 'Our IF *Annika* was built in 1968. We have raced her within the Carrick Roads area ever since. *Annika* is currently holder of the Marieholm National Championships trophy, the Marieholm Falmouth Week trophy, the Brian Snowdon Memorial plate, the Zeitgeist Trophy – all Marieholm events – and the Millennium Trophy for Falmouth Town (handicap). She also tends to do pretty well in club handicap fleets.

'We cruise a little bit, but she is really used for racing. With a previous owner she did sail to the Azores. We love sailing her and find her very comfortable in all winds. She copes really well in a blow, leaning over to a certain point and then holding well. Her long keel makes riding a big sea relatively comfortable.'

Another IF Boat owner, John Todd, spun me an unusual yarn. 'I was sailing back from the Helford in *Sundance*, under spinnaker on a warm summer day in Force 2/3 winds, only to notice the church on the cliff at Mawnan Smith remaining stationary on the same bearing. I suspected seaweed or plastic sheet to be the cause, only to find I had gently run aground on a basking shark.'

Still, barring basking shark adventures, there's no doubt that the IF Boat is a very special Swede. In the world of beautiful little performance cruiser-racers she is – in my opinion – top of the pops.

'The Folkboat is very much a sailor's boat, and I have yet to meet a sailor who didn't appreciate sailing one'

Much to offer

If you want a more spacious family cruiser that has similar charms and looks, Sundén also designed the **Marieholm 26** in 1976 and the slightly modified 261 in 1982. In profile, she's very similar to the IF Boat, but is longer (8.0m), heavier (2,500kg) and has more room down below. A twin-berth forepeak, amidships hanging lockers, small heads compartment, saloon settees and simple aft galley make her comfortable enough for a small crew. A Volvo MD5 provides oomph under power. Her rig is of the same easily-handled fractional configuration with a 14.97 SA/disp ratio. If performance cruising – whether coastal or offshore – is more your bag than One Design racing, the Marieholm 26 has much to offer.

A few of the Sundén-designed Marieholm 32 (and 32E) yachts were also sold in the UK. With a short counter stern and deep long keel, this model has a similar look to the Nicholson 32. Unlike its smaller sisters, the 32 has a masthead rig. The Lars-Olof Norlin-designed Marieholm 33, on the other hand, sports a transom stern and fractional rig. In some ways she looks like a smaller and sportier version of the Rustler 36, and is equally attractive. When the Swedish Marieholm yard ceased trading, manufacturing was based in Holland where Marieholm NL (www.marieholm.nl) still build this model. Proving its prowess as a quick blue-water cruiser, young Swedes Eiliv Hägg and Emilie Edvinsson cruised their 33 Båten *Anna* around the world inside three years, returning to Hovås, Gothenburg in July 2014. Then they celebrated their return to terra firma by getting married and going back to work!

They wrote: 'It was with mixed feelings that we sold our beloved boat *Anna* a month ago. The plan was always to sell her when we came back home to get money to restart our terrestrial life, but she has taken good care of us and been safe in severe weather, and wonderful to live on when the weather was fine. We have so many memories after sailing and living aboard her for three years. A couple of our own age bought her and plan to take her to the Caribbean again. We wish them all the best with her!' It makes a change to come across youngsters who circumnavigate the globe before settling into marriage and careers, as opposed to 'baby boomers' who retire and then take to the high seas.

Sweet sheer

Albin Marine was another Swedish company to flourish as a builder of GRP cruisers from the late '60s. From the launch of its first top-selling cruiser – the **Vega 27** – up to its eventual demise in the '80s, Albin was very much a 'volume producer' so not really comparable to the more traditional Swedish yards. For example, 3,450 of the successful Per Brohäll-designed Vega were built, and

they rolled out around 1,400 of its little sister, the Viggen 23. Many Vega 27s in particular have voyaged around the world (see 'Spoiled for choice', PBO March 2015). Provided the structure is surveyed and the engine is preferably not the original, Vegas make excellent budget cruisers to this day.

Perhaps the most famous Albin model is the Rolf Magnusson-designed **Ballad 30**. This started life as a successful Half Tonner called the Joker then blossomed when Albin fully 'productionised' it and launched it as the Ballad in 1971. Around 1,500 were built over the next 11 years, making it one of the most successful 9m (30ft) cruiser-racers ever built.

With its elegant overhangs, sweet sheer and graceful coachroof it's a handsome yacht, and a beam of 2.95m gives it plenty of room down below. A ballast ratio of around 47%, DLR of 282 and SA/disp ratio of 16.07 ensure it has a sharp performance.

The interior is practical and offers a twin-berth forepeak, amidships heads and good-sized settee berths. The galley and fixed chart table live aft, either side of the companionway. The deckhead is fully lined with a GRP inner moulding so it ages well.

As well as excelling at regattas, Ballads have also completed many successful blue water voyages. For example, back in the mid-'70s, Swedish sailor Herbert Jivegård decided that he deserved a break after 47 years at work, bought Ballad number 1047 and set sail on a circumnavigation. Nicknamed Papa Blondie in the Caribbean (because of his fair hair), he pushed on and completed his 44,000-mile voyage five years later.

Another Ballad owner wrote on a discussion forum: 'I have owned an Albin Ballad since 1972. It is a great yacht with no vices. I have read that surveyors have never come across one with osmosis.

'Although thought by some as a "wet" boat going to windward, I would not see this as a major problem. If there was one thing I would change it would be the engine size. My Ballad, number 112, is fitted with the original Volvo MD6a which puts out, or used to, a paltry 10hp. In flat water this is adequate, but it becomes very slow work if you have to motor into any sort of a sea. I would love to have 16 or 20hp. I have sailed the Ballad in offshore races when the wind was over 50 knots and neighbouring masts were tumbling. I have great confidence in the Ballad's ability to keep going in conditions which would defeat other similar-sized yachts.'

Tim Burne adds: 'I cut my "offshore" teeth in traditional, sturdy, seaworthy, longish-keeled yachts with spartan, practical interiors. The first time I stepped aboard a Ballad in 1991 I thought that, if ever I could afford a yacht, one of these would be just about perfect. I have now had one for eight years and she exceeds all my expectations. Ballads look lovely, are very seakindly and have good windward performance.

'They are practical, have a simple layout and a simple (but tall) rig. However, the large No1 genoa can be hard to handle and means very poor visibility; and she's heavy-helmed, but she does go where she is pointed.

'I have heard it said, generally from frustrated competitors, that "any weather is Ballad weather", but she inspires great confidence in a blow. She has a small main and rarely needs more than one reef, but in a full gale with two slabs and a No3 she's very well balanced and makes good progress to windward. In heavy weather she more than holds her own against modern yachts.

'There are various accommodation layouts available but, in my opinion, passage making with more than four becomes uncomfortable. Theoretically there is accommodation for six.

'I still enjoy moderate success at club level here in Plymouth and really enjoy regularly beating Contessa 32s on the water in a boat a fraction of their cost!'

However, a thorough survey is necessary when buying any elderly yacht that might have been pushed hard or raced regularly. While the Ballad's encapsulated lead keel is a

Albin Nova: available second-hand from £18,000

Albin Vega: available second-hand from £6,990

Albin Ballad: available second-hand from £9,500

Arcona 400: available second-hand from £116,000

bonus, some owners of earlier models have had problems with the mast step located on the cabin sole above the forward end of the keel moulding. The cavity beneath the step contains a glassed-in steel support that can deteriorate, causing the mast step to collapse, so check this out. Another owner of an early Ballad reported that the GRP 'web' to which his main bulkhead was bolted pulled away from the hull on the 2001 Fastnet Race, with dire consequences. A few yachts have also had (curable) issues with the sandwich decks – and of course a newer engine is always a bonus. If you check these factors out and buy a well-maintained example, the Ballad makes a great budget 30-footer. An active UK owners' association (www.ukballadassociation.org) provides regular newsletters, organises One Design events and is a valuable source of advice and information.

Albin also built several other sporty models, including later versions of Peter Norlin's successful Scampi Half Ton cruiser-racer, and Norlin's 1981 design, the 10m (33ft) **Nova**, also sold well. This attractive fin-keel cruiser-racer has plenty of beam (3.15m) so it packs in excellent accommodation, and a 47% ballast ratio, 210 DLR and 19.4 SA/disp ratio give it powerful performance. All in all, a desirable yacht.

'True cruiser/racer'

I've left one of the best Swedish brands to last. It's always nice to finish on a high. Torgny Jansson told me he took over the family yard Boo Marin from his father in 1999 and set about putting his Arcona range firmly on the map.

Designed by Stefan Qviberg, the early Arcona 32, 36, 38 and 40DS models sold in small numbers – but the exceptional **Arcona 400**, launched in 2001, really spurred things on. Torgny told me he decided to hit the market with 'a new boat that was good enough to get the wheels moving, and the 400 did the job. We sold 18 boats in the first year. People just loved the boat and she won many races. I remember one Round Gotland Race in which we had Arcona 400s in first, second, third, fifth, seventh and ninth places, so she's really the true cruiser/racer! The 400 started a new era in the company and we grew very quickly to become the third-biggest sailboat producer in Sweden: today we are second after Hallberg-Rassy and not so far behind.'

Arconas have also excelled in European Yacht of the Year Awards run by a group of leading yachting magazines. Torgny said: 'The 430 won the EYOTY in 2009 and the 340 was nominated the year after, but Jochen Rieker at *Yacht* magazine said: "Torgny, your 34-footer is by far the best in the market today, but you don't win this trophy two years in a row". We won the Swedish yacht of the year in the performance class this year with the 380. The EYOTY jury wanted to nominate her as well, but we said no thank you – we didn't want to take a boat to Barcelona!'

Qviberg's Arcona designs all major on stunning good looks (in the modern idiom), beautifully crafted interiors, powerful bulbed lead keels and fractional rigs. One professional yacht deliverer wrote: 'Cruiser/racers can be faster upwind, but at the cost of slamming and discomfort. One exception was an Arcona 380 I recently delivered from Stockholm to Hamble. This boat is so close-winded that the VMG was as good as motor-sailing and achieved in greater comfort, even across the North Sea in lumpy conditions thrown up by a Force 5/6. Although perceived as an outstanding racer/cruiser, her interior layout and sailing qualities offshore make her a serious contender as a fast cruising boat.'

'Sailed conservatively, the Arcona 400 gives students great confidence because she feels so safe'

Arcona owners are also happy. Bob Trimble, who races his 400 regularly with his wife in the RSYC Two-Handed series, told me he moved from a Maxi 1050 to the Arcona because of 'build quality, performance and comfort. We usually pick up one or two trophies each year, and last year we won the Offshore Series in our class.' He also cruises (two-up) and uses the 400 for teaching at his South Coast Sailing School. 'Sailed conservatively, she gives students great confidence because she feels so safe.' He is now adding a wind generator and Hydrovane self-steering for this year's solo AZAB race.

Another happy owner, Cathy Brown, told me she and her husband Richard had owned a Hustler 25.5, a Sigma 33 and then a Grand Soleil 40 over the last 30 years before selecting an Arcona 410 as their latest boat. She told me she 'loved the high-quality build, easily-handled sail plan and cosy quarter sitting area in cockpit. We did not want to go above 12m (40ft) because this is about the limit for relaxed two-handed sailing. The electric winch for mainsail reefing is invaluable, making it easily done from the cockpit. And we loved the friendly and helpful attitude of the builders and UK agents.'

The current Arcona range includes the 370, 380, 400, 410, 430 and 460 – so if you fancy a top-quality, high-performance modern Swede, these beauties should be on your list.

NEXT MONTH

The classic and influential boat designs of John ('Jack') Laurent Giles

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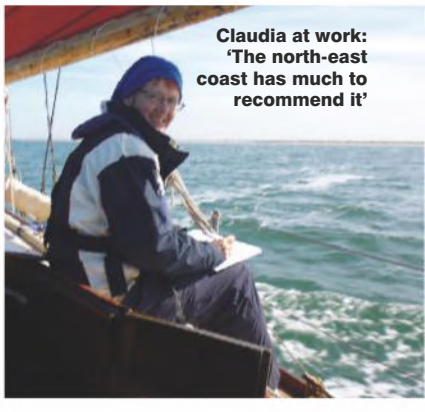
Witch, a 31ft gaff cutter, ploughs through the waves



Claudia at work: 'The north-east coast has much to recommend it'

Castles, crab pots and a man called Chaos

Claudia Myatt boards the East Coast gaffer *Witch* on a leg of the OGA Round Britain Challenge for a north-east coastal cruise

I stood on the foredeck, watching the reassuring shape of the Fraserburgh lifeboat heading for us. Two days into my summer cruise, and life was getting interesting in ways I hadn't bargained for when I offered to join the skipper and crew of East Coast gaffer *Witch* for a leg of the OGA Round Britain Challenge.

We were tethered by the stern to a crab pot line which ran bar taut from the propshaft to the pot buoy several metres away. We considered going over the side to cut ourselves free, but would have then been in a worse position, engineless in a strong tide and light winds close to a rocky shore. The coastguard decided to send out the lifeboat, whose crew were keen for some training on a shout so close to home.

Crab pots are the bane of coastal cruising, and the north-east coast seems to be particularly fertile ground. In theory it's easy to avoid them in daylight if you keep a sharp lookout, but in our case the strong tide had pulled the buoy under so that the skipper didn't see it until the last minute. Avoiding the buoy itself didn't help, as the pickup line was several metres long and set by the tide across our path.

The Fraserburgh lifeboat comes to the rescue after *Witch* falls foul of a crab pot line

The east coast of Scotland and north-east England is usually thought of as the least interesting part of a round-Britain cruise, but if you can avoid crab pots it has much to recommend it. I had joined *Witch* after her transit through the Caledonian Canal for the final leg of her clockwise circumnavigation, and we left Inverness at 4am on a cold, drizzly morning with a fresh westerly wind blowing us down the Moray Firth.

Whitehills was our first destination, a miniature harbour just west of Banff. It has a tiny marina inside two stone piers, requiring a last-minute sharp turn to port before you end up on the beach. Once inside, there's a visitors' pontoon with

ABOUT THE AUTHOR

Artist Claudia Myatt pursues her 'obsession with boats and the sea' from her studio in Waldringfield Boatyard, Suffolk. She provides cartoons for Dave Selby's monthly column in PBO, and has also written and illustrated the RYA's 'Go!' series of children's books. She lives afloat on an elderly Dutch tug boat

a hospitable harbour master, and a crew room with kitchen, launderette, tea, coffee and decent Wi-Fi. We spent the morning there waiting for the wind to drop and the swell outside the harbour entrance to die down, watching a basking shark cruising lazily outside the breakwater. Picking up emails, I found the latest Dave Selby article which needed its usual cartoon, so I was able to use the crew room to draw, photograph and email the cartoon to PBO all in one morning. Thanks, Whitehills!

Our next stop should have been Peterhead to join others in the gaffer fleet, but our unwanted crab pot encounter meant a night in Fraserburgh. A large fishing harbour, Fraserburgh has no facilities for yachts, but the lifeboat crew – who could not have been more helpful – found a diver to clear the pot line and check the prop for damage. There was a bent blade, and the engine now worked in forward gear only: enough to let us sail on to Peterhead, only switching on the engine as we approached the marina. With no neutral or reverse gear the only way to stop the boat was to turn the engine off, a job that has to be done from inside the cabin by pulling a cord behind the companionway steps. I was in the cabin, hand on string, for the skipper's command 'Now!', and buckets were ready on the stern as an emergency brake if needed. However, all went well: friends were on the pontoon ready to take our lines, and we coasted into the berth with buckets unkicked.

Witch **dries out amongst the fishing boats at Eyemouth**

The high stone arms open and gratefully you turn into the gap

Divine intervention

From Peterhead to Eyemouth is a 24-hour hop across the firths of Tay and Forth. The forecast was offering fresh south-easterly winds to come, but luckily our passage was made in the last of the light south-westerlies. It was early July, and the nights were short; there was still a glow in the sky at 11am as we sailed past Bell Rock lighthouse, one of the most famous of the Stevenson lights. Formerly the Inchcape Rock, the name was changed in honour of the Bishop of Arbroath, who attached a bell to the rock to warn mariners. A pirate removed the bell, and was then himself wrecked and drowned on the rock: divine intervention, the bishop would have said. The poet Robert Southey made the story famous in his ballad *The Inchcape Rock*:

But even in his dying fear,
One dreadful sound could the Rover hear;
A sound as if with the Inchcape Bell,
The Devil below was ringing his knell.

North-east harbours are nearly all tucked behind strong stone piers. They are full of charm and history, but approaching from seaward is challenging. Trusting chart and plotter you turn your bow to the shore, having already taken down sail in the lumpy swell in case there is no room to round up and drop the main inside. The gap between the walls is usually hidden from view until you're close enough to say good morning to the fishermen on the end of the quay, then the high stone arms open and gratefully you turn into the gap, praying that a large fishing boat is not on its way out in a hurry. Approaching Eyemouth at 5am, large seals blinked at us from the rocks, but just as it looked as if we were going to end up on the beach, the north-east harbour trick worked its magic and the entrance revealed itself.

Eyemouth is a long, narrow harbour with plenty of depth for most of its length. It was full of fishing boats, old and new, but there are pontoons for yachts and most of the boats in the gaffer fleet were already there. At high water, the harbour master and other willing hands helped to manoeuvre *Witch* alongside the slipway at the head of the harbour to dry out. While the front came over and the rain fell, skipper Alistair set about trying to repair

Skipper makes a temporary repair after the crab pot encounter

The advantage of a drying harbour: alongside at Whitby, waiting for the replacement prop to arrive

The abbey ruins dominate the cliffs at Whitby

'Newcastle was a revelation – brash and cheerful, cultured and colourful'

the damaged prop while I explored the town. North-east harbours lack the touristy gloss of West Country ports, which is probably hard on the economy of the town, but it makes them nicer to visit by sea; no crowds or gimmicks, just a genuine welcome for those who have taken the trouble to sail there. Eyemouth holds the ISCA collection of historic ships but they are only available to see by appointment, so I had to be content with the themed exhibition in the new quayside 'World of Boats' instead.

South of Eyemouth the coastline changed, from rocky cliffs to rolling hills with a castle on every headland. There was no time to stop as we sailed between the Farne Islands and the mainland, but what a beautiful area. We were overwhelmed by history – to port the Longships light, scene of Grace Darling's exploits; to starboard Lindisfarne, island monastery, and Bamburgh Castle. The sea was alive with gannets, puffins, guillemots, fulmars and terns. There were seals on every rock, and occasional glimpses of porpoises and dolphins.

There were occasional glimpses of porpoises and dolphins

Cultured and colourful

A day's sail from Eyemouth brought us to the shelter of Amble Marina to wait out strong winds before the next hop to Newcastle. Sailing up the busy Tyne, with the helpful Tyne VTS reminding us to keep well clear of the 'cor curriers' (car carriers), brought us suddenly out of the dreaming castles and wild headlands of the north into the heart of industry. Crumbling dry dock gates and empty quaysides were a reminder of the Tyne's great past, and we didn't know what to expect from Newcastle.

But as the arch of the graceful Millenium Bridge tilted to let the gaffer fleet into the heart of the city, we were in for a surprise. Newcastle was a revelation – brash and cheerful, cultured and colourful. I enjoyed every minute of our three days there, from the packed quayside pubs to the art galleries and the iconic Sage building.

The July heatwave had settled as we motored south to Whitby, back to the world of small harbours behind curved stone piers. I'd been looking forward to Whitby and was not disappointed. On the south side of the harbour we discovered music in pubs, narrow cobbled streets and steps leading up to the ruined abbey on the cliffs, a pretty market square with cafés and buskers, the Captain Cook museum, and the best-smoked kippers in the country (so we were told). On the north side were supermarkets, amusement arcades, the 'Dracula Experience' (I shudder to think) and tourist trips in a half-sized *Endeavour*.

Through helpful friends on a local gaffer we were introduced to a man called Chaos, who showed us the best place to dry out against the harbour wall for stage two of the prop repairs: with high pressure in the forecast there was the likelihood of light winds to come, and motoring for hours with a vibrating bent prop would not do the engine much good. Alistair had arranged for a spare prop to be couriered to Whitby, and it arrived with just enough time to be fitted at low tide while I explored, sketched and shopped.

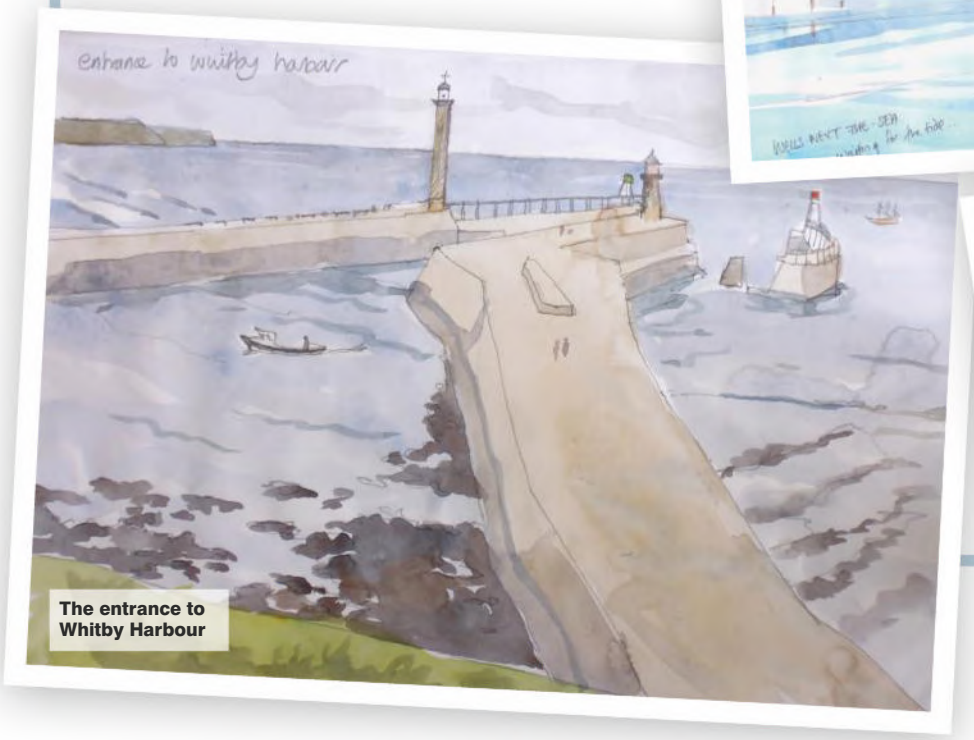
South of Whitby, our choice of harbours became more limited. The next stopover for the gaffer fleet was Grimsby, but between us lay Flamborough Head. Local sailors sucked in their teeth: 'Ah, you have to be careful of the tides at Flamborough!' Like all headlands, it commands respect; tales abounded of boats which had failed to take account of the overfalls and had broken gear, or had never been seen again. Getting the timing right for this headland required some complex maths as we needed to be at Flamborough at slack water, but we were unable to get out of Whitby at low water with our 2m draught.

The timing was tight, but we rounded the chalk cliffs of Flamborough at more or less the right state of tide, riding the confused seas with spray flying and bowsprit dipping. The sky and sea were alive with birds diving and calling; clouds of guillemots scattered in front of our bows and gannets dive-bombed all around. Soon we were safely through and came to anchor on the south side of the headland, rolling gently in the swell within sight of Bridlington.

A slalom of buoys

Flamborough Head marked a turning point: from the steel-blue deep waters of the north, we gradually came into the brown swirling shallows of the Humber Estuary. Welcome to the East Coast! At Spurn Head we waited for permission to cross the shipping lanes and approach Grimsby. The coast here is low-lying and featureless, but Grimsby is marked by its distinctive minaret-shaped tower, built in 1852 to provide hydraulic power to the lock gates and cranes of the dock. Visiting yachts normally go into the marina in the old fish dock, but as guests of Grimsby and Cleethorpes YC we had to wait for a car carrier or two to emerge from the lock

A selection of Claudia's watercolours from her north-eastern cruise



The entrance to Whitby Harbour

Wells-next-the Sea

A sketch of the coble *Fair Harvest*

before we were escorted by the club commodore through a maze of docks into Alexandra Basin, where a barbecue and a warm welcome awaited us on the quay.

Being back in brown waters made us feel like we were nearly home, but south of Grimsby there was still the Wash and the Norfolk Coast to negotiate. We considered making Lowestoft in one hop from Grimsby, but as there was time in hand we decided to take the opportunity to visit Wells-next-the-Sea, a day's sail. Entering Wells at dusk was challenging, the approach a slalom of buoys in a narrow channel with the tide pouring and swirling over the surrounding sandbanks.

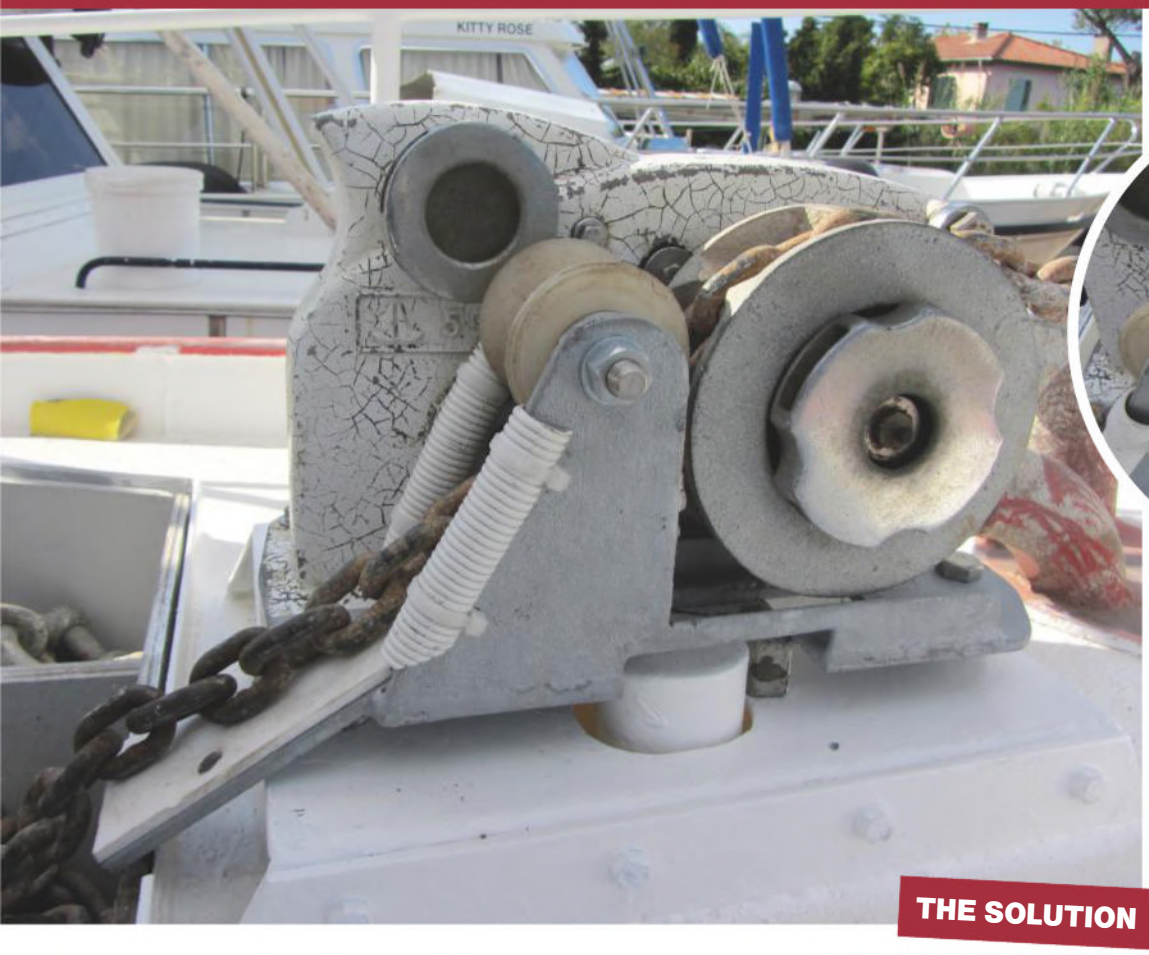
'Keep close to the reds and you'll have plenty of water!' the harbour master had told us. 'Plenty' wasn't the word we'd have chosen as the echo sounder dipped below 2.6m (we drew 2.2m). Once in the shelter of the creek, the channel became even more interesting, with some tight turns through the saltings. We bumped our way along the bottom as the light faded, with not quite enough water in the creek but keen to tie up while we could still vaguely see where we were going. We went aground once more while rounding up to come alongside the restaurant ship *Albatros*, but a few full revs brought us safely alongside as darkness fell. Customers on the *Albatros* came to watch. 'Ooh, are you a pirate ship?' squealed a family of small children.

Wells may have been tricky to enter, but it repaid the effort. We had to leave on the tide the next morning, but we took a walk to the beach in the morning sun and had the chance to look at the winding channel at low tide. Later, the harbour master was in his launch to guide a procession of yachts out of the creek, and it was easier this time at a later state of tide.

A pleasant day's sail round the Norfolk coast brought us to Lowestoft and then Walton, completing *Witch*'s Round Britain Challenge, a total of over 1,600 miles. I found the north-east to be far more interesting than expected, a place of contrasts both ashore and at sea. *Witch* is already considering a return trip up the East Coast, through the Caledonian Canal to the Hebrides and then back the same way. If I get invited back, I'll be there!

Close encounters with car carriers as they turn yards from the Grimsby and Cleethorpes YC pontoons

Witch **is a 31ft gaff cutter built by Dickies of Tarbert in 1898 as a private ferry for the Laird of Gigha in the Hebrides. She was one of the oldest boats in the Round Britain Challenge fleet. Based on the Walton Backwaters in Essex, she has been in the same family for over 50 years, and is currently owned by Alistair Randall.**



ABOVE A roller mounted above the chain, close to the drum, effectively presses the chain into the teeth

LEFT The finished article, constructed in steel after a test maquette was made in plywood, works extremely well

THE SOLUTION

Overcoming the snags

Dermot Doyle reveals how he made his windlass work with a deck-mounted chain locker

THE PROBLEM

The previous ground tackle arrangement drained into the bilges

When I bought *Alianco* she had a pretty standard set-up for her ground tackle – a manual windlass and a navel pipe leading down to a chain locker below decks. Perfectly practical except that it drained into the bilges, which meant smelly water running to the back of the boat: and, as she was a steel boat, more chance of rust. So I decided to build and fit a deck-mounted chain locker behind the windlass, well aware that I was going to have problems with the chain no longer hanging straight down from the drum.

In fact, there were going to be two problems, both of which are fairly obvious from the first photo. With the chain biting over such a small part of the circumference, it would undoubtedly skip over the drum as it ran out – and all 70m would go over the bow whether I wanted it to or not. The second problem was that the chain would need to be led back into the locker to stop it bunching up under the drum when I winched it back in. Some sort of ramp was the obvious answer, but then I could still see the chain snagging as it dragged on whatever it slid down and bunching up anyway.

The more I thought about it, the more I felt that the answer to the first problem would probably all but solve the second – and so it turned out. What I needed was a roller mounted above the chain, close to the drum, effectively pressing the chain into the teeth. I thought that feeding it into the drum like this would stop it jumping up, and as luck would have it I found an old nylon bow roller among the miscellaneous stuff on board when I bought *Alianco*. I had kept it as a useful thing for the future, and the future had now arrived.

As a prop maker/engineer/carpenter for theatres, museums and the like I have manufactured a lot of mechanical effects over the years, and have developed a way of working that is quick and easy for sorting out mechanical problems. I make a crude maquette in leftover bits of wood and screws, which can be cut and shut about with ease until all of the problems are evident if not immediately solved. Once I am happy I can simply copy it in steel, adding bearings and any improvements, using the exact same measurements that have been perfected with very quick trial and error.

I chose the natural run of the chain from the drum to the locker as my starting point and offered up the roller close to the drum to determine the design of the frame needed to hold it in place. I could have pressed the roller down on the chain and increased the bite of the chain on the drum, but the already shallow angle of the ramp would have been even flatter and this didn't seem like a good idea. I

The test frame was constructed from plywood scraps

made up the frame in plywood scraps, designing as much with a jigsaw as a pencil until it fitted, bolted down onto two of the windlass mounting bolts. The length and position of the ramp was again dictated by the run of the chain and ran as close to the drum as possible to lessen the chance of the chain jamming down the gap.

The first test worked remarkably well, with the roller essentially guiding the chain down into the ramp and stopping it from falling off. That is, it worked well until it jammed. One of the links of the chain that lies flat in the teeth was able to resist the guidance of the roller, and it wedged itself in. This was surprisingly easy to solve, with a redesigned ramp having a tongue extending into the middle slot of the drum. This pulls the links lying at 90° to the drum onto the ramp and the flat ones have to follow. After three hours' work I had my working maquette.

Then it was time to copy it in steel. I was able to do this myself, but I would still advocate the idea of working out your ideas in plywood first, especially if you have to pay someone else to do the metalwork to your design. You want to know that it is going to work before shelling out your hard-earned cash. The only additions after having the whole thing galvanised were to bolt a sacrificial piece of nylon cut from a cheap chopping board onto the ramp and two bits of plastic pipe cable-tied on into pre-drilled (and galvanised) holes. All easily replaceable when they wear out.

The whole thing works extremely well. The only problem this set-up doesn't solve is flaking the chain into the locker, but a push with a foot after every few pumps gets things evened out.

ABOVE The test frame in position. **INSET** The redesigned ramp has a tongue which extends into the middle slot of the drum

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Get-you-home sail repairs

Ben Meakins tries out some useful temporary sail repair methods that will tide you over until such a time as you can get to a sailmaker

Regular inspection of your sails will help to avoid any major problems

Most of us spend much more time servicing our engines than we do our sails, which is a shame, given that the sails are the main motive power for most sailing boats. They have a hard life, being flogged, flapped and dragged around obstacles every time they go up. It's surprising that they last as well as they do!

Day and weekend sailors don't experience sail damage so often, with most sails spending most of their lives under sail covers: but talk to anyone who has undertaken a longer passage and you'll find many a tale of tearing sailcloth and days on end spent stitching in a repair to a relatively new sail while running down the trade wind routes to the Caribbean and Pacific cruising grounds.

Modern sailcloth materials are impressive, with better strength and longevity, resistance to tearing and UV damage than traditional sails – but they still tear and chafe. If your sails are damaged during a day-sail, cruise or longer passage, you need to be able to fix them – or make a repair strong enough to get you home and to a sailmaker.

This article will focus on the kit and some basic techniques that will allow you to get home with all canvas flying – but it's a good idea to get the sail to a sailmaker as soon as you get home for a proper repair to be carried out.

Some long-distance cruisers, like this crew, have the facility to use a sewing machine, but most of us must rely on hand-sewing repairs

Mahina Expeditions/ www.mahina.com

Essential bare minimum sail repair kit...

Palm
To push needles through sailcloth without damaging your hands
Needles
A selection of sailmaker's needles in various sizes
Twine
To stitch up any sails – and also useful for whipping lines
Sticky-backed Dacron
To patch tears and holes

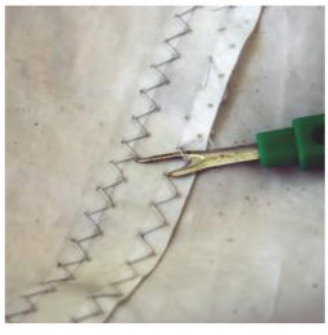
...and a fully-featured sail repair kit

Needles
A selection of sailmaker's needles in various sizes
Palm
A well-fitting, good quality palm will make things much easier
Awl
For making holes, an awl – along with a chopping board – is ideal
Quick-unpick
For quick and easy undoing of old stitching – and undoing any mistakes!
Sticky-backed Dacron
As much of this stuff as you can carry will make repairs more effective
Spinnaker repair tape
Ideally in all the colours of the spinnakers you have on board
Double-sided tape
A good-quality double-sided tape will help to repair seams and other areas by holding two bits of cloth together while you sew it
Leech tape (folded)
A length of leech tape will let you cover frayed or damaged edges of sails for repair and cover the sticky Dacron
Pliers
To pull needles through sailcloth when a palm won't do the job
Candle stub to wax needles
Either candle wax or silicone spray will help get the needle through, especially if you're using double-sided tape to hold the seam together
Wet/dry paper
Useful for polishing and de-rusting needles
Waxed twine
Some sort of waxed twine will make your repairs much easier – it glides through holes
Duck tape
A useful standby when nothing else is available
Good scissors
The best-quality scissors you can fit in will make life much easier
Acetone
Although difficult to store, acetone does the job like nothing else when you're trying to decontaminate an area of a sail prior to sticking
Length of webbing
Webbing is useful for repairing leeches and chafed areas

Dacron sails

Mending seams

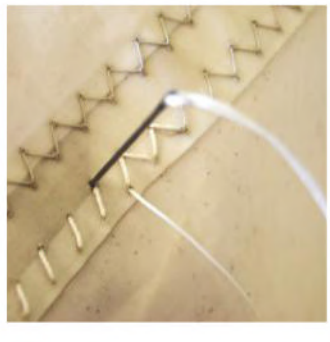
Seams are liable to come apart when the stitching has become degraded by UV light and breaks up. This often happens where the seam has also been rubbing against a shroud or line. It's easiest to repair before it breaks, so a regular inspection for loose and rotten threads is worth your while, but if you don't catch it in time…



1 First, remove all damaged stitching on both sides of the sail using a knife, scissors or, ideally, a quick-unpick thread cutter.

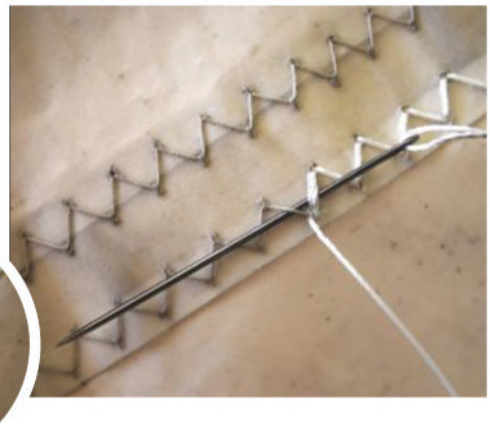
2 With the rotten or damaged section removed, it's helpful to stick the seam back together. Double-sided tape is ideal to avoid the seam shifting.

3 With the seam stuck together, you can stitch it. In heavy cloth and to help pass through the double-sided tape it can help to make holes with an awl. Stitch one half of the zigzag first…



4 …and then go back on yourself, stitching the other half of the zigzag. Use the same holes where possible and try to keep your stitches and the tension in the twine even.

5 Finish by tying the line off with a knot. Melting it a little with a lighter can help everything stay attached.

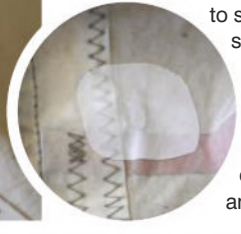


Dacron sails continued

Holes and tears

Tears in the fabric of the sail, as opposed to failed seams, are harder to repair. Here, sail repair cloth is essential. Unfortunately, you'll need the sail to be dry for it to stick.

1 Rinse the sail with fresh water to remove salt, and dry it in the sun or in front of a heater if possible.



2 For small tears, a small amount of fabric will suffice. Cut the sail repair cloth to size, one for each side, and round off the corners to avoid it lifting. Stick it down well, pressing out all bubbles and creases.

3 For bigger repairs, consider using a few layers, with the first layer narrow and used to 'stitch' the sail together...

4 ...and the later layers increasing in size to reinforce the repair and ensure the edges of the tear stay aligned.

5 This repair is finished off with a large sheet of sticky-backed Dacron, stuck on both sides and around the luff of the sail to keep everything together and spread the load.

6 If the cloth isn't sticking properly it may help to sew around the edge of the repair to secure it: although, to avoid weakening the remaining material, this is only worth doing on big repairs where you won't find a sailmaker for some time.

Leech repairs

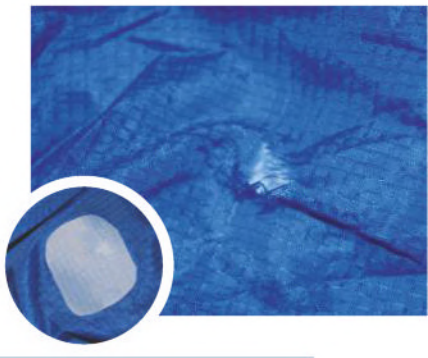
Webbing can be useful here, in order to sew a strong edge onto a damaged leech or to add extra strength to a batten pocket repair. Alternatively, a length of folded leech tape will help to finish off any edge repairs.

Sliders

Here again, Dacron cloth is your friend. If an eyelet has pulled out, you're best off removing it completely and putting a layer of cloth on each side. If you can't avoid using the sail, the plastic 'snap-on'-type eyelets are useful as a temporary low-load repair. It's also worth keeping spare plastic shackles and sail slides in your repair kit for easy replacement and repairs.

Spinnakers

With the lightweight nylons used for spinnakers, it's best to avoid sewing through the sail if at all possible as this may affect the spinnaker's shape. For small tears it's best to use a single layer of repair tape, but bigger repairs require a layer on each side of the sail. If the repairs are too big, however, it may be best to not use the sail until it can be properly repaired by a sailmaker.

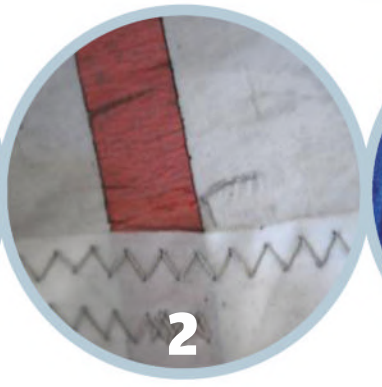


Modern laminate sails

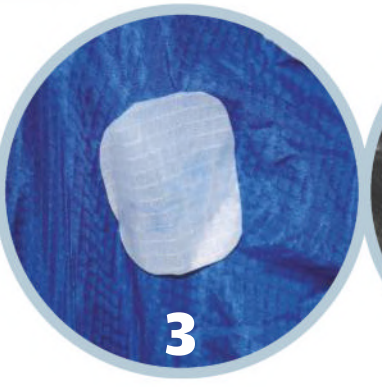
Laminate sails are similar to repair to Dacron – except that they generally don't respond well to stitching, especially when they reach a certain age. That means you'll need some serious tapes – and the sail will need to be dry for them to stick. Recently, new products have been introduced which offer some serious adhesive power. One of these is Dr Sails, a two-component epoxy base adhesive designed for use on sailcloth, which cures in 30 minutes. It's worth patching laminate sails as soon as you start to notice any degradation or tears in the weave to avoid the laminate breaking down.

Eight tips for effective repairs

1: Keep it flat
When stretching out a sail for repair, use a table or pontoon: but if you're on board a small boat and struggling for space, a floorboard or washboard will give you a portable flat surface.



2: Patch both sides
For tears, patching both sides is the only way to avoid snags, and it gives the repair a much better chance of staying in place. Here you can see a nick in the sailcloth is secured by a repair on one side, with another to go.

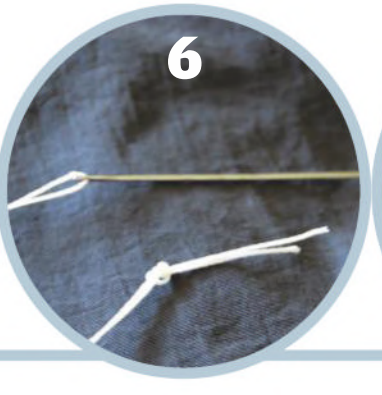


3: Avoid puckering the sail
When repairing spinnakers, make sure the edges of the repair line up and you're not inducing any creases into the sail – it'll add stress and lead to an early failure of the repair.

4: Remove rust from needles
Rust can add a surprising amount of resistance to a needle as it passes through a sail – use wet/dry sandpaper to polish a needle if you don't have a shiny new one.

5: Round the edges of patches
Don't forget to round off the edges of any patches to avoid them snagging and taking the whole repair with them.

6: Heavy-duty repairs
For repairs in heavy cloth or that require lots of strength, double up the twine. This effectively doubles the strength of the repair for little extra work.



7: Check the rest
If a seam comes apart, check the remainder with an awl or a screwdriver to ensure that the rest won't come loose.

8: Keep it moving!
Use silicone spray or beeswax to keep the needle lubricated: it will help to keep the adhesive from the double-sided tape off the needle.

Preventative maintenance

There are some things you can do to keep your sails in a condition where they won't tear.

Remove them when not using them
Take your sails down off the furler and put the sail covers on as soon as you get in to avoid unnecessary UV damage.

Chafe patches
Adding chafe patches to high-wear areas of your sails can pay dividends. Adding webbing reinforcement to headboards that chafe on the backstay, or leather patches to areas where sails chafe on stanchions or shrouds, can prolong their life and reduce the chance of having to make a repair.

Boats heading off on downwind ocean passages often tape pipe lagging to their spreaders to avoid chafe on the mainsail.

Rotten stitching
Regular checks for rotten stitching are a good way to ensure your sail's seams will stay intact.

UV strips – designed to be replaceable
If your UV strip is degrading, don't worry – they can be discarded. Drop the sail off at the sailmaker for a new one to be fitted before it starts to fray or tear.

Leather adds extra chafe protection to high-wear areas, like clews

Check your sails for loose and damaged stitches to avoid issues

UV-strips are designed to be replaced – here, a sailmaker fits a new one

All screwed up

Removing stubborn fixings can sometimes be really tricky, but following Julian Peckham's advice might make life a little easier

Using mole grips on a screwdriver assists leverage

INSET Screws with chewed-up heads like this can be very difficult to remove

Screw fixings on boats can be a devil to remove. Chances are they'll have been there for years, be covered in paint, or have welded themselves to their surroundings through corrosion.

Here I'm going to show some ways and means of shifting them – and also how to get them out when all else fails.

First and most important is to clear the screw head of old paint, varnish or glue. You're going to need maximum purchase to turn the screw, and that means the slot or crosshead needs to be clean so your screwdriver has something to work on.

Don't try to use an old screwdriver whose tip has blunted, rounded edges – you'll never get a good purchase on the screw slot and you will only ruin the screw head.

The tip of your screwdriver needs sharp, well-defined edges. If it is slightly worn, you can tidy it up on a bench grinder… so you end up with something like this.

Clean out the slot with an appropriate tool: the point of a sharp bradawl is good for either slot or crosshead screws.

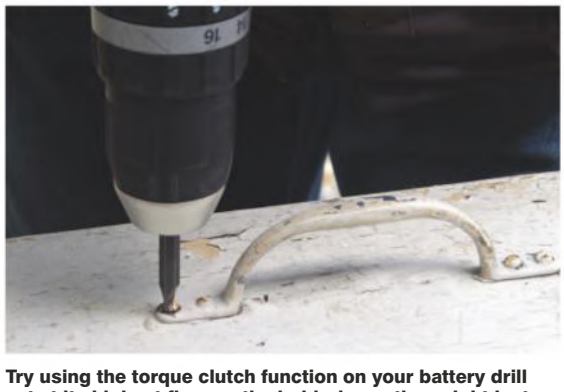
The end of a broken hacksaw blade works really well to clean paint from slotted screws.

Ensure you have the right-sized screwdriver for the fixings you're trying to undo. It needs to be a snug fit in the screw head.

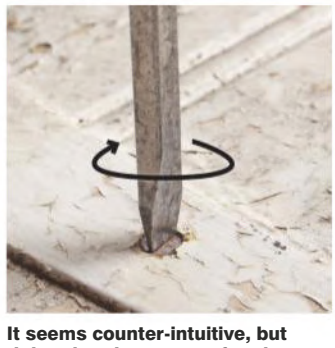
Brass screws in particular can be really soft, and a screwdriver that's too small will simply chew the screw head.

To improve your turning power, use a spanner on a square-shanked screwdriver as a lever. Put your weight behind the screwdriver, and turn slowly.

If you don't have a square-shanked screwdriver, try a pair of mole grips on a round shank – they'll do the same job.



Try using the torque clutch function on your battery drill set at its highest figure – the juddering action might just be enough to loosen the screw.



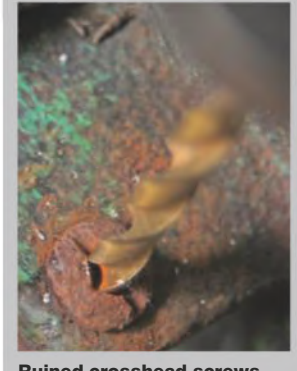
It seems counter-intuitive, but tightening the screw a fraction at the start is often just enough to crack its resistance – it'll then undo much more easily.

Try heating the screw by holding a hot soldering iron against the screw head for several seconds before having another go with the screwdriver. The heat and expansion might be enough to free it from the substrate.

Provided you're trying to loosen a screw from something sturdy, an impact driver is your last resort to getting it undone. Hold firmly, and wallop with a heavy hammer. It's vital the impact driver's tip is a snug fit in the screw slot, otherwise the slot will be ruined by the hammering.

Drilling out ruined screws

When the screw head has had it and the fixing still hasn't budged, there's only one thing for it – you'll have to drill the head off.



Ruined crosshead screws are easy – you have a ready-made indentation for the drill bit.

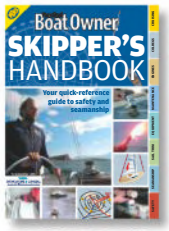
For slotted screw heads use a centre punch to make a dent right in the centre of the slot.

Use a small-diameter drill bit sitting in the dent to drill a pilot hole down to the screw shank.

Now take a drill bit around the size you think the screw shank is, and drill until the screw head breaks away from the shank – the head will likely cling to the drill and start spinning.

With the head drilled off, you can now lift off or prise away whatever the screw was holding to reveal the shank sticking out of the substrate. A pair of locking mole grips can now be clamped on and the screw shank can be unwound.

PBO Products and services



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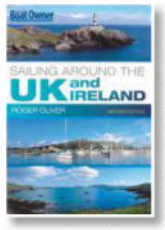

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Laura Hodgetts reports on the latest marine products

C-MAP MAX-N+ 2015 cartography

This cartography is designed to offer enhanced navigation in Europe with Lowrance Gen2, Gen2 Touch and Gen3 Multi-Functional Displays (MFDs). It includes the majority of the C-MAP 4D content, up-to-date global chart data, High-Resolution Bathymetric (HRB) bottom contour data and detailed contour charts. There's also a worldwide database of marina info/port services and detailed aerial photos of harbour entrances, channels and marinas. MAX-N+ 2015 also provides boaters with chart detail for Europe's inland lakes and rivers. The cartography launch coincides with the release of upgraded software from Lowrance, available at no cost to owners of these MFDs. Boaters who want the cartography must first take advantage of free software upgrades for their compatible Lowrance systems at www.lowrance.com.

C-MAP MAX-N+ 2015 charts can be purchased through Jeppesen dealers on pre-programmed micro SD cards, or online via www.gofreemarine.com.

Lowrance HDS Gen3 and Gen2 Touch owners can also access the GoFree store via the MFD when connected to the internet. C-MAP MAX-N+ 2015 charts can be purchased and downloaded directly to the plotter. ■ **http://c-map.jeppesen.com**

Digital Yacht DTV100 HD TV antenna

The new DTV100 HD TV antenna enables you to access free digital terrestrial TV services on board. With its high-gain amplifier it is designed to cope with even the weakest of signals, and as it is omnidirectional there's no complicated aligning. In addition, it will provide a feed for an FM stereo radio. The 280mm-diameter DTV100 is promised to be easy to install: it can either be pole-mounted or attached to a standard 1in x 14 TPI-style base used for standard VHF and GPS antennas. It operates on 12 or 24V and is supplied with a below-deck amplifier which provides adjustable gain from -7 to +29dB to get the best picture. There's an optional dual-outlet amplifier unit for boats requiring a dual TV system. The DTV100 costs £150.

■ **www.digitalyacht.co.uk**

Waterproof case for iPad Air

New to the Armor-X case range is a model to fit the iPad Air. This 100% waterproof and protective case for the Apple iPad Air offers full protection from water, dust, snow and shock. Features include full touch-screen functionality. The case is promised to ensure that all buttons, the charge port and jack are accessible. It has a polycarbonate outer shell case with shock-absorbing TPU for impact protection and an integrated X-mount system, designed to fit a range of mounts (available separately). It is priced at £59.95.

■ **www.force4.co.uk**

PBO TESTED

Mirka Deros 650CV 'dust-free' sander

Dust-free sanding sounded too good to be true, but the Mirka Deros 650CV sander, priced from £340, makes it as dust-free as possible. It does this with an electric sander connected to a vacuum cleaner – but you can do this with a standard orbital sander. Where the Mirka differs is in using an abrasive mesh, which lets the vacuum suck the dust through the mesh: – a standard sander uses a circle of ventilation holes and thus misses much of the dust.

■ **www.mirka.com/uk**

Verdict

I used the Mirka Deros to sand out the forepeak of my boat when replacing headlinings, connecting it to a Wickes wet-and-dry vacuum cleaner, and it removed old paint very effectively – with none of the clouds of dust that usually accompany such sanding activities. When I'd finished there was no noticeable dust in the air or on the horizontal surfaces of the forepeak – very impressive.

The sander can also be used with ceramic silver ace discs, which are much longer-lasting than standard discs. The unit itself was lightweight and compact – it's claimed to be the lightest on the market, and it was certainly lighter than the small Bosch random-orbit sander I normally use. The mesh discs are of a comparable cost to standard sanding discs.

Ben Meakins

Pontos four-speed winches

PBO TESTED

Winching can be hard work. There's no getting away from that, unless you go the electric route and accept the cost and power consumption. For some sailors, hard work isn't a problem. If you're on a racing yacht and have plenty of muscle power, speed is what matters. For cruising sailors, on the other hand, mechanical advantage is more important: the load on the handle has to be manageable, even if it takes a little longer to sheet the headsail home or winch someone up the mast.

This need for both speed and power is why most winches have two speeds. But all too often the high gear isn't fast enough for high-speed action and the low not low enough when the going gets tough. Surely what's needed is extra gears: after all, who would choose to go cycling up hill and down dale on a two-speed bike?

The good news is that you can now buy winches with four gears. They've been developed by Pontos, based in St Malo but co-founded by an Englishman. The Pontos Grinders – now available in the UK, in size 40, 46 and 52 – are designed for speed and most likely to be fitted to racing yachts. They have two gears equivalent to those on a conventional two-speed winch of the same size plus two higher gears. Cruising sailors are more likely to choose the Trimmer winches. Available in the same range of sizes, they also have two 'normal' gears but their extra two are lower. In both cases, changing gear is simple: wind the handle the other way. A patented clutch and spring mechanism does the rest. As well as the Grinders and Trimmers there's also the Compact, a two-speed winch the size of a 28 but whose low gear gives the power of a 45. Pontos winches come with a five-year warranty and, not surprisingly, cost about 15% more than conventional alternatives. The 40s in Grinder and Trimmer versions are £1,046 and the Compact is £683. Look out for our full test next month. We've tried them and they really do work.

David Harding

■ **www.pontoswinches.co.uk**

Mastervolt DC Master 24/12-50

Offering seamless compatibility of 12V gear with 24V power sources, Mastervolt has launched what is promised to be the most powerful DC-to-DC converter. The DC Master 24/12-50 converts a 24V power supply into 12V so as to power 12V equipment. With a maximum rating of 50A continuous and 60A peak, the converter is said to offer more power than any other product on the market. For more capacity, up to 10 units may be paralleled. Weighing 2.5lb (1.1kg) and measuring 35.5cm x 12.7cm x 10.2cm, the compact enclosure is designed for easy installation. Priced at £588, the unit comes with a two-year manufacturer's warranty.

■ **www.mastervolt.co.uk**

Bungee Spongee

Fed up with losing your sponge or getting messy with no way of cleaning up? The Bungee Spongee is a high-density sponge on an elasticated cord, which can bail out water plus clean up. Designed to be simple yet effective, this product is now being distributed to over 50 specialist outlets, chandleries and yachting clubs across the UK, ahead of its launch in the US next year. The creator, British angling champion Leon Mead, came up with the idea after years spent both in and on the water. He has spent four years creating the perfect product, patenting it across Europe, China and the US.

The Bungee Spongee is available in a range of different colours and shapes – including boats, fish and stars. The recommended retail price is £9.99. Watch this space for a PBO review!

■ **www.bungee-spongee.com**

PBO CLASSIC KIT

Celebrate YOUR Classic Kit! What has served you well? Email pbo@timeinc.com

The Star Mooring Hook

PBO reader Chris Harman bought this item of kit back in the '60s and, despite having bought and sold many small craft since then, he has never parted with his Star hook.

He says: 'I recall that the original advert claimed it would "stop a 5-tonner at 5 knots". I never actually put that to the test but it certainly proved its worth over the years, enabling easy pick-up with its wide mouth and stainless steel sprung retaining clip.

'I believe its manufacture was both its success and its downfall: it was made of forged steel, which although very strong was too expensive for the market at that time. The modern alternatives I see from time to time do not match it for connectivity or strength.

'I have been a PBO reader from almost the first issue, when I remember your articles on such arcane topics as converting Ford 10 side valve car engines for marine use and making danbuoys using empty Fairy Liquid bottles. Ah, those were the days!

'Best wishes on continuing to produce my favourite magazine.'

Chris Harman, Cornwall

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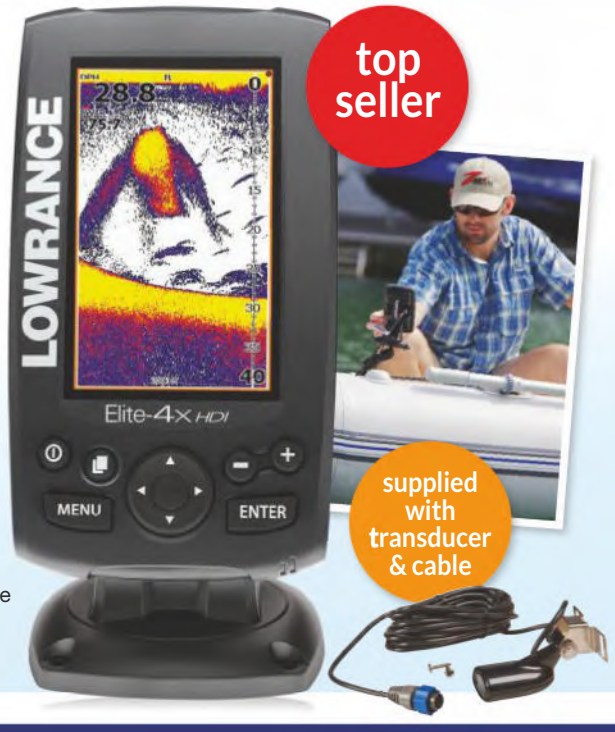

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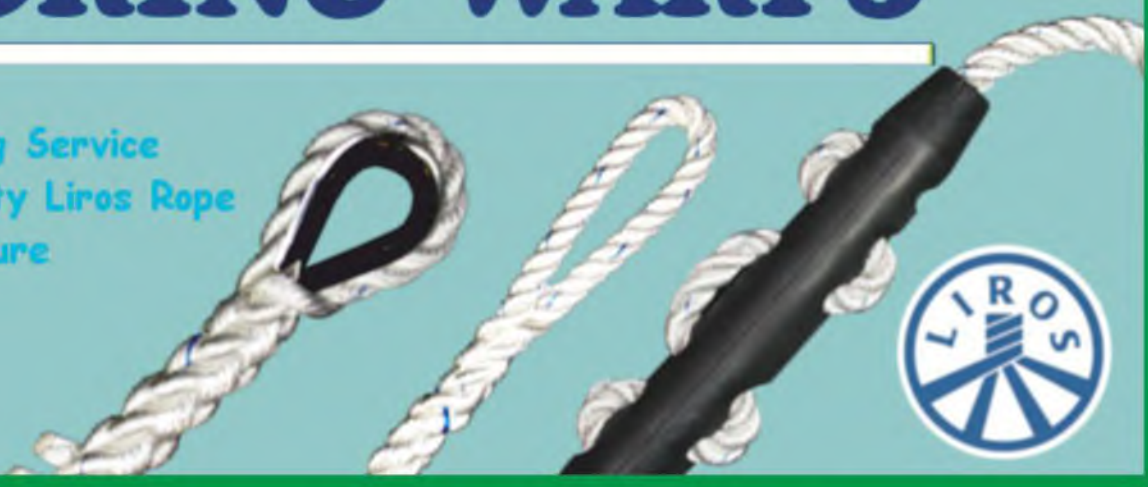

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John's Leisure 17 as found, tilting off her trailer as rabbits had undermined the supports

Preparing to trail the boat home. She had languished among chest-high nettles for 17 years

Rescued from the nettles

John MacKenzie finds himself renovating a war veteran's Leisure 17 that had resided among chest-high nettles in a field in rural Hampshire for 17 years

For quite some time, I had been trying to find out a little more about HMS *Bergamot*, the flower class corvette on which my father served in the Second World War. The classic book and film *The Cruel Sea* was based on a corvette, a tiny vessel derived from a whaler and used for convoy escort duty throughout the war. In due course, I stumbled upon an obscure internet forum which included some discussion about corvettes.

Soon I was sharing remembered stories passed on from our sadly departed fathers with Colin, who is also the son of another *Bergamot* crew member, when up popped a man called Alan with first-hand memories of *Bergamot*, asking to be put in touch with other crew members. Alan is in his 90s and has the memory of an elephant, recounting stories and anecdotes of life on board HMS *Bergamot* and much more. Alan has become a very good friend: I treasure his enthusiastic and positive attitude to life, and despite his clear recollections of HMS *Bergamot* all those years ago he certainly does not live in the past, and has a very modern outlook.

Alan mentioned that he had sailed a small Leisure 17 cruiser for many years in the Solent. As a lifelong dinghy sailor this rekindled my hankering for a small boat with a lid on it, so I was interested in his opinions on his elderly, diminutive craft. He enthused that she had no foibles, and that he and his family had thoroughly enjoyed sailing her. He then mentioned that he still had her under a cover on his rural smallholding in Hampshire, where she had been languishing for the past 17 years: if I was interested, he would be happy for me to 'take her away'.

I conducted some research on the Leisure 17 and found much praise for this attractive little vessel, and even an account of an eventful transatlantic crossing by John Adam in 1968: this ended in his

***Bergamot* crew member Alan, left, with John MacKenzie**

John MacKenzie's father served during the Second World War on HMS *Bergamot*, a flower class corvette

ABOUT THE AUTHOR

John MacKenzie lives in West Sussex and sails from Newhaven. He learnt to sail aged eight during a holiday on the Norfolk Broads, when his father set him adrift in a hired lugsail dinghy to see if he had absorbed what he had been taught.

imprisonment in Cuba as a spy, as the Cubans did not believe such a small boat could successfully cross the Atlantic.

The Leisure Owners Association was very friendly and helpful and supplied a wealth of useful information which confirmed that Leisure 17s, despite their age, are solid, well-built basic boats with a very active and enthusiastic following. I was hooked. But what condition was she in?

A very sad old lady

After a 140-mile round trip with perfect directions from Alan (apart from a long-gone Little Chef), and with his permission to come aboard, I found myself in a field full of chest-high nettles in an idyllic spot in rural Hampshire. When I hacked my way to the boat with a machete I found a very sad old lady full of water and covered in moss, tilting off her trailer as the rabbits had undermined the trailer supports – and there was more rust than trailer. As for the cover, that had been half off for some time, the wind having whipped it up and scraped several arcs in the moss, lichen and the gelcoat of the hull.

I like a challenge, but I have to admit to having serious doubts at that point. However, it was a lovely sunny day, and things always look better in the sun. After a thorough inspection, I managed to convince myself – with a little imagination – that she was basically sound and could be nurtured back to life. I accepted Alan's kind offer – or should that be his challenge?

Shortly after seeing the boat I visited Alan at his home near Lymington, armed with a bottle of his favourite single malt whisky and some chocolates for his lovely wife Jean. Alan helped me load the car with sails, cushions, an aged Evinrude 6hp two-stroke outboard and various other boat bits and pieces. Alan is as fit as a fiddle! Jean confided to me that Alan was delighted that his beloved little boat was to be renovated and put back on the water again, where she belongs.

After a thorough renovation including new wheels, tyres and brakes, the trailer was modified with a bow support, docking arms and a winch

I now needed to get the boat back home, some 70 miles away, but first I needed somewhere to put her. This entailed replacing part of a fence with hinged panels, moving a shed on rollers (like the Egyptians building the pyramids) on to its new base, felling a tree and removing its root stump, and levelling the ground to a gentle incline – phew! Now I had a boatyard with access ready for my little cruiser.

My next job was to get the boat off her trailer. With dozens of concrete blocks and substantial timbers on Alan's smallholding, plus my three-ton trolley jack, I eventually managed to extricate the trailer from under the boat single-handed. After fitting new wheels and tyres, and re-greasing the bearings and hitch, I cautiously towed the remains of the trailer home for a strip-down and rebuild with new brake parts, lots of DIY MIG welding, a couple of new additional spars and a new paint job. The trailer has been modified with a bow support, docking arms and a winch so that I now tow her bow-first: the original set-up was stern-first, which other owners have advised me makes for tricky launches and recoveries.

A blank canvas

Having carefully eased her back on to her now shiny and renovated trailer (again single-handed), I gingerly towed the sad old girl back to my new boatyard and set about her restoration. She was a very basic boat with no electrics, instruments etc, but having had only two owners she was pretty much a blank canvas for me to work on, albeit a tired one. A quick pressure-wash removed a lot of the moss and lichen, and she started to look a bit more shipshape. With a big pot of elbow grease and abrasive pads the teak woodwork came up surprisingly well, and with new washboards she started to look quite smart.

The milky windows were

LEFT Dismayingly full of water, but at least this indicated that the boat was basically sound

BELOW The milky windows would eventually be removed and treated with a mild rubbing compound

Moss and lichen had taken hold to an extensive degree

After a few modifications, John's garden became a serviceable boatyard and work on the Leisure 17 proceeded in earnest

ABOVE and TOP The rubbing strake was repaired with copious applications of epoxy and strategically-placed clamps

removed and treated with mild rubbing compound: they polished up to a surprisingly high standard, which avoided my having to replace them. The window seals had become very brittle and cracked so I replaced them all with new seals and a chrome-effect infill to brighten her up a bit – very 'blingy'. The interior had become home to several small animals and needed a complete clean-out and repaint: it is now fresh and bright.

Much of the internal woodwork had suffered badly from the ingress of water over many years, but when it dried out most of it was salvageable. After stripping off all of what remained of the old varnish, and with the application of a few new coats, it came up looking good. All the deck fittings were removed and re-seated to make her dry inside.

The mast had been resting low down on the trailer and had become home to many generations of mice: the whole length was packed with chewed-up halyard to make cosy nesting material. Strangely, the mice had only chewed one halyard so I was left with an aptly named 'mouse-line' for re-threading the new halyards. The pressure-washer soon removed the remaining detritus.

The boat had many layers of now crazed antifouling paint which had set rock-hard. I am sure that the laborious job of removing it will resonate with many readers as one of the worst jobs of a renovation. However, a cheap electric scraper greatly speeded up the process, and as the boat was only 4.3m (14ft) at the waterline I could at least see the light at the end of the tunnel. Her keels were in a sorry state, with much rust and several deep pits that needed to be primed and filled after being ground back to solid iron. Her topsides are in her original gel coat, which is not perfect: but with some cutting back and polishing she now looks presentable.

In my enthusiasm I added navigation lights, a depth sounder, a fixed radio and mast top antenna and a small GPS to link to the DSC radio to get her seaworthy. In fact she is probably far more seaworthy than I was as my previous sailing experience was dinghy sailing on inland waters, but I wanted her to be right. I mounted the instruments on a hinged panel to the side of the companionway rather than mounting them in the cockpit to avoid making holes. An unexpected bonus from the lack of fixed instruments is that this preserves that area as backrests for comfortable stretching out on lazy summer days.

The original method of attaching the mainsail was by a bolt rope up the mast slot: this was very stiff, even after cleaning and treating with PTFE, so to make raising and lowering the main a much easier and safer task I have fitted nylon sliders, which work well.

My wife Sara has flashbacks about standing in windswept dinghies clutching wobbly masts while I attached the shrouds and stays, so I fabricated a method for single-handed raising and lowering of the mast. I needed to replace the original standing rigging as it appeared to be original, so I added moveable stainless steel straps to enable the lower shroud pivot points to line up with the mast base, providing lateral support when raising and lowering the mast without exerting strain. It works very efficiently, and was relatively easy once I had worked out the required lengths with a bit of schoolboy trigonometry and line-of-sight checks. Fellow boaters are of course always prepared to lend a hand, so I could probably have done without this enhancement – but at least I know I can raise and lower the mast on my own without scaring Sara.

The 40-year-old teak grab rails scrubbed up well prior to re-oiling

No foibles

The boat was launched from her trailer at Newhaven Marina without any problems on a sunny summer day in mid-July last year, having taken a year to renovate. (I just have to keep an eye open for the 143m ferry that creeps up behind the breakwater and past the marina to her berth.) Two months of enjoyable sea trials followed, undertaking some great cruises along the South Coast with the Seven Sisters chalk cliffs as our backdrop and a trolling line picking up mackerel for supper as we went. Alan's statement that she had no foibles was spot-on, as she is very stable and sails well for such a small cruiser: I am looking forward to using her as much as possible and enhancing my seamanship.

The 1974 two-stroke Evinrude was soon replaced with a shiny

The keels needed to be primed and filled after being ground back to solid iron

To avoid making holes in the cockpit, instruments were mounted out of sight on a hinged panel beside the companionway

Dual backstays were fitted for better access to the outboard

new 5hp Mercury four-stroke long-shaft saildrive, which is excellent as it has extra thrust and the gear change on the front of the engine. I could probably have managed quite well with a 4hp, but I tend to over-engineer most things!

My upgrades after initial sea trials include leading all the control lines (there aren't many!) back to the cockpit and adding a triple rope clutch for the furler line, main halyard and topping lift. The old hanked-on jib worked well, but I am all in favour of an easy life so I have renovated and installed an old furler that I found through the owners association and adapted the jib to fit it, which is as yet untried. I found the original jib sheet clam-cleats awkward, so I have replaced them with new ones. The original genoa cars were simple resinite O-rings with a thumbscrew mounted on now brittle plastic rails. The cars were fiddly to adjust and had quite a lot of friction, so I replaced these with alloy rails and adjustable genoa cars. The original backstay split into two at about 1m up: being so low, it got in the way when controlling and lifting the outboard, so I fitted dual backstays for better access to the outboard at the risk of having more weight up top and increasing the windage.

Sara was very patient during the year-long renovation, for which I am very grateful, but at least she has known where I was – in the boatyard or the garage! She is also smitten with our new-to-us little cruiser: well, on very calm days! Meanwhile, Alan was a guest at the Russian Embassy recently when he received the Ushakov Medal for his Arctic convoy duty on board HMS *Bergamot*. Alan said it was 'a bit chilly' on the Arctic convoys, but it was a dry cold so it wasn't so bad: typical of him to find something positive!

And what did I name our boat? Why, *Bergamot*, of course, in tribute to Alan, my father Angus, Colin's father, and all the brave crew of what Alan describes as 'a happy and clean ship'. Say hello if you are near Seaford Bay and spot sail number 1630. Fair winds! PBO

John named his boat *Bergamot* in tribute to his father Angus, Alan and the other brave crew of his boat's illustrious namesake

TESTED

A proper little ship

Nick Burnham takes to the water in the Tug Yacht 33 *Union Jack*, a 'quirky motorboat from Gloucestershire'

One of the many pleasures of this job is meeting hugely interesting and divergent characters: and greeting me at the very agreeable surroundings of Penarth Marina are two gentlemen whose individual characters are worth getting to know as, between them, they encapsulate exactly what this splendid little ship is all about.

Alan Keef is the owner of *Union Jack*, the Tug Yacht 33 you see before you. A light railway engineer, his company builds narrow-gauge railways and bespoke locomotives and carriages. He describes it with a smile as a 'hobby that got out of control'. Whether you'd like a ride-on for your leisure park or an industrial railway for your quarry, Alan is your man. He has even put a railway on a huge commercial ship! Talking of ships, Alan also once owned a share in a 1,000-tonne coaster. 'Rich in experience if not actual money,' is how he describes commercial ship ownership.

Then there's Craig Glassonbury. When Craig was at school he knew exactly what he wanted to do when he grew up; he wanted to build boats. So when the school organised work experience, Craig bagged himself a week at the local boatyard, RW Davis & Son. And when the school organised a second week of work experience which was supposed to be at a completely different organisation, Craig dug his heels in and managed to get another week at the boatyard. 'All I wanted to do was build boats,' says Craig, 'so there was no point going anywhere else'. A Youth Training Scheme followed, at RW Davis naturally, leading to a full-time job.

That was 28 years ago: Craig's been there ever since and now manages the place. RW Davis is based on the Gloucester to Sharpness canal that links the River Severn to Gloucester. With about 10 staff, a dry berth, a 10-tonne crane, a machine shop and a woodworking shop, there isn't much the yard can't handle. 'From keel to curtains, we can do it here,' says Craig.

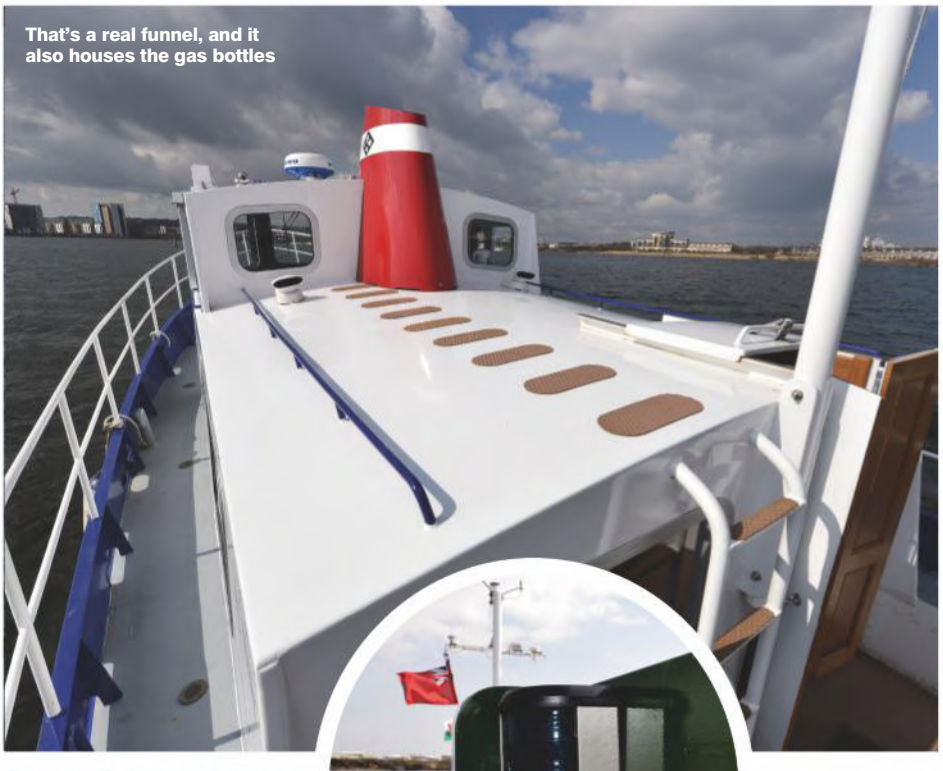
RW Davis specialises in steel boats. They've built canal boats, barges, replica working narrowboats, butties and passenger ferries. 'Anything we like the look of,' is how Craig

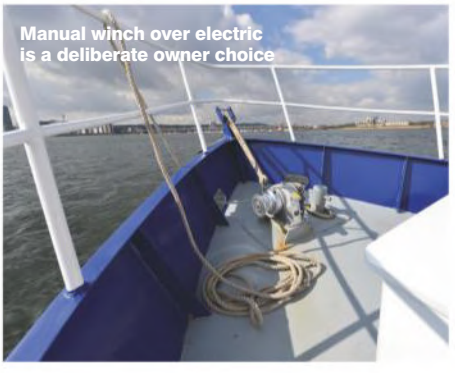
Beta diesel engine: easily accessed once the floor panels are lifted

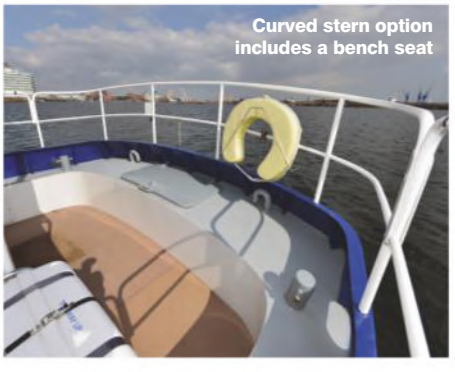
ABOUT THE AUTHOR

After 20 years as a yacht broker, Nick Burnham embarked on a marine media career, quickly rising to the position of boat test editor for *Motor Boats Monthly*. Nick is now a freelance writer and photographer covering all things nautical.

The Tug Yacht 33 looks every inch the proper little ship


That's a real funnel, and it also houses the gas bottles


Manual winch over electric is a deliberate owner choice


Curved stern option includes a bench seat

Proper nav lights and a mast aft for antennas, etc

Wide, deeply bulwarked side decks make this an easy boat to work

describes it. Alan laughs. 'He's not joking: when I went in there with plans for my Tug Yacht to enquire about costs to build it, the kettle went on and the enthusiasm was such that I had to let them build it even if I'd changed my mind!'

The plans were bought from Californian company Glen-L. Having owned motor-sailers in the past (a steel 30-footer and a Fairey Fisherman built out of hot-moulded mahogany), Alan had been toying with the idea of moving to pure motor in order make life afloat a little easier as he crept toward later years, and bought the designs 15 years ago in 2000. Work started in 2012, and the boat launched two years later in 2014.

The real deal

Alan's brief was to build him 'a proper little ship', and that is exactly what he got. It's a term that gets bandied about a lot for anything small and solid, but this is the real deal. Built from mill-certified British steel, 5mm thick to the chine and 4mm above, it sits squarely on the water exactly like a commercial tug, complete with high stem and gunwales that sweep down and aft to the pert transom with its boarding steps that are cleverly replicated either side of the rudder to allow someone in the water to gain access back on board.

That rudder is linked to the long central keel, encapsulating and protecting the propeller. Twin bilge keels allow the craft to take the ground upright, albeit at a bow-down attitude. At deck level, deep bulwarks are topped by guardrails that are almost waist-high, protecting massively wide side decks. Those rails, although painted, are actually stainless steel so that they won't rust if the paint is chipped or scratched. Fairleads through the bulwarks are similarly stainless steel-rimmed for the same reason.

The original plans suggested a wooden superstructure, but Alan and Craig agreed that making the whole ship out of steel made far more sense. The profile is entirely sympathetic to the tug style, with a raised pilothouse and forward-sloping windscreens. There's even a proper working funnel (emblazoned with Alan's company 'K' symbol, one of several dotted around the boat): the exhaust is fed upwards through it rather than exiting the transom as normal.

It also provides stowage for gas bottles, keeping them up out of the way, allowing them to vent easily overboard and keeping the gas pipework to a minimum (the galley is directly beneath it). Up forward, the manual rather than electric winch is a deliberate choice by Alan, who once accidentally stood on the 'winch in' button of a previous boat while his hand was on the chain...

Improved lines

Back aft there's a small cockpit well with a curved bench seat that matches the sweep of the transom. In fact there were two transom options, this rather more sculptured offering or a completely flat truncation of the hull. The latter, Craig and Alan felt, looked rather like someone had run out of money in build and simply stopped dead.

A few other changes were made to the initial designs. The boat is actually slightly longer than the original 9.4m (31ft) plan, much of which has gone into providing a larger pilothouse, itself set a little further back than originally intended to improve the lines. 'This is a real benefit of working with steel,' says the evangelical Craig. 'You're not stuck with whatever comes out of a mould,

Throttle/shift levers at rear of saloon allow the boat to be driven from the cockpit using an emergency tiller

The well-equipped galley includes a gas oven, grill and hob

Backrest to starboard lifts to create two Pullman berths

you can build whatever you like!' I'm put in mind of Jack Rolfe, fictitious owner of the Mermaid Yard in the BBC's *Howards' Way* – 'I'm not building bluddy toy plastic boats in my yard, and that's final!' Certainly the Tug Yacht 33 is no toy.

Cabin access is via doors either side of the wheelhouse or bi-opening doors and a sliding hatch from the cockpit into the aft saloon. Mind your head as you access via the latter option and you find yourself in the snug yet spacious saloon, well lit by large Houdini windows. There's a comfy dinette to port – an oval table featuring another of Alan's 'K' motifs and a settee to starboard, the backrest of which lifts to create two occasional pullman berths. The two levers just inside the door to starboard are repeat throttle and shift levers – should you ever need to use the emergency tiller they allow you to control the engine from the cockpit as well.

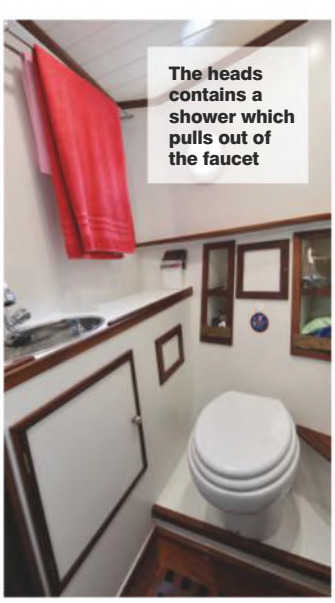
Ahead to port is a decent-sized, U-shaped galley complete with an oven and grill to go with the two-burner hob, and a small bar area lives opposite to starboard, housing the fridge. Three chunky steps take you up to the pilothouse: this is where it really feels like a little ship. The helm is to starboard ahead of a pedestal-mounted captain's chair and there is further seating to port for crew to enjoy the elevated views through the 8mm-thick windscreens under way. Head forward and down and you'll find a roomy heads to port, a shower pulling out of the faucet and the electrics panels and stowage opposite. A vee-berthed cabin in the bow completes the layout. The whole interior is lined in sapele (a mahogany substitute) and oak, giving a traditional feel entirely in keeping with the style of the craft.

Easily accessible

A Beta engine was chosen for a couple of good reasons. They're made in Britain which, given that it's a British-built boat made out of British steel and called *Union Jack*, fits rather well. And, more geographically precisely, Beta is rather conveniently based in Gloucestershire, just five miles from RW Davis. Fitted beneath the pilothouse floor, it's easily accessible by lifting a couple of floor panels and there is plenty of room to get down and around it. Its 3.6 litres spread over four naturally aspirated cylinders and 75hp swing a 24in propeller to give the Tug Yacht about 7½ knots flat out, but before we can test it we need to wriggle free of the confines of Penarth Marina.

A single shaft drive doesn't give many options compared to a pointable sterndrive or the leverage of twins, but 10 tonnes of displacement and those bilge keels make it a docile and predictable companion. Certainly a bow thruster would be a benefit in tight berthing situations, but it's not essential.

In company with Craig's wonderful converted 1930s Liverpool class lifeboat (along for photography duties, surely the safest photo boat I've ever had the use of) we slip through the lock into the calm open water of a still day. With the side doors open there's plenty of light and ventilation, augmented by the large windscreens and overhead



The heads contains a shower which pulls out of the faucet

Electrical panel and storage just forward of the pilot house

hatches. Only the view aft is slightly compromised by the central funnel positioned just behind it flanked by two small windows, but it's perfectly workable should you need to check what's coming up astern before changing course.

Pinning the throttle to the end stop sees the GPS (part of a fairly impressive armoury of navigation equipment Alan has specified for *Union Jack*) eventually peak at 7½ knots, the tachometer showing 2,750rpm. Drop the revs back to 2,000rpm and you find the cruising sweet spot of about 6 knots, the boat feeling every inch the 'little ship' – absolutely rock-steady.

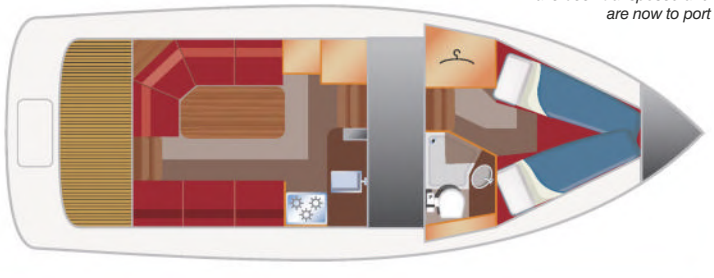
With the dry exhaust exiting through that funnel just aft of the pilothouse noise levels are a touch more intrusive that one might like. Interestingly, my sound meter read 74dB(A) which isn't that loud, showing that perception is as much about tone as volume. It's the price you pay for a 'proper' dry exhaust: routing waste engine gases through a more traditional wet exhaust would eradicate the issue if it were a concern.

Beta claim a consumption of about 8lt an hour which, given the Tug Yacht's 800lt fuel capacity, makes the maths easy – 100 hours which, at 6 knots cruise, gives about 600NM until dry, or 500 with a 100-mile safety margin. Of course, in reality you don't start your engine and immediately run at cruising speed until you shut down, so for some real-world figures Alan has calculated that over the 130 running hours he's completed since launch he has averaged 2.926lt an hour (calculated to three decimal places: can you tell he's an engineer?). What's more interesting is that he couldn't give me that figure until a few days after the test because those large tanks meant that, despite a year of use, at that point he hadn't actually filled up since he bought it! Suffice to say that running the Tug Yacht is unlikely to break the bank.

The 'little ship' theme continues in the raised pilot house with its pedestal captain's chair and vertical wheel

INSET A handsome plaque commemorates the Tug Yacht's manufacture

A bank of 'old school' toggle switches



Note: since the plans were drawn, the heads and galley have been transposed and are now to port

PBO verdict

The Tug Yacht comes as a real breath of fresh air against the backdrop of excellent but anodyne mass-production fare I often get to test. Conceiving a boat from a set of $300 plans from California and commissioning a small boatyard in Gloucester to build it might seem like a brave leap of faith until you meet the two men involved; the owner with his keen engineering understanding, and the builder with his obvious passion and dedication for boatbuilding. Certainly it has paid off for them both. Alan is smitten with his Tug Yacht, a genuine 'little ship' that fits his way of life perfectly – and Craig is so pleased with how it has turned out that he wants to build more of them. If you want the last word in performance, fashion and interior design, the Tug Yacht isn't for you. Little sleep is being lost by the Sunseeker board of directors about this quirky motorboat from Gloucestershire. But if you fancy a proper little ship, this just might be worth serious consideration.

Tech spec

Tug Yacht 33

Price: £175,000 inc VAT
LOA: (hull): 10m (33ft)
Beam: 3.5m (11ft 6in)
Draught: 1.29m (4ft 3in)
Displacement (approx): 10 tonnes
Fuel capacity: 800lt
Builder: RW Davis & Son Ltd,
Tel: 01452 740233
www.rwdavis.co.uk

Getting a grip

David Parker describes how to repair the shattered handle on an outboard engine

It only takes a split second to break something, and often it can be the simplest of things that causes it. But this breakage wasn't on the boat – it happened in the garage.

I was moving a large sheet of cardboard, and the end just caught the top of the outboard engine. I watched as it tipped it off balance – and even though it seemed to fall in slow motion, I couldn't reach it in time. It landed heavily, flat on its back on the concrete floor, smashing one side of the handle into pieces. I think most of us know the sort of things we say at moments like that.

I looked at the handle, cross with myself for breaking it and crosser still because at first there seemed to be no obvious way of simply repairing this moulded shape. The handle is integral to the engine block casing, and to replace it would mean stripping the whole thing down: a lengthy process, and I wanted to use the engine that weekend. And how much would a new engine casing cost?

However, when my initial frustration cleared, I came up with the solution. I would salvage as much of the broken handle as I could and stick it back together. This would never in itself be strong enough, but I could use it as a former for rebuilding the moulded shape with GRP tape and epoxy fillers. Here's how I did it, and the same technique of wrapping GRP tape around a former can be used for a variety of repairs to shapes such as handles and rails. I have also used similar techniques to make strong repairs to oar blade ends and paddle shafts.

The completed repair. Having now regularly used it, the engine handle actually feels stronger and more robust than it did before.

The handle after the breakage shows that the gap would be a difficult shape to replicate accurately, and the rounded grip is integral to the engine casing.

The first job was to collect the largest sections which had smashed when it fell: these would initially be glued back together using Superglue.

Because Superglue sets as you hold it I was able to reposition the broken bits one piece at a time. This has to be done as neatly as possible because they will need to be a tight fit.

The handle is now reassembled and provides the shape to reinforce with glassfibre tape to make a permanent, strong repair.

Prime the surface first with resin and then wrap the tape around the handle beyond the breakage point. Take care to ensure that the resin is fully impregnated into the tape.

In a job like this it is often difficult to get the tape ends to lay flat, but don't overwork them or you will just pull out the fibres. Leave frayed edges to cure and then cut them off with a knife.

When the first layer is cured, sand it down thoroughly to remove any high points and provide a keyed surface for the second layer.

Prime the cured glassfibre tape with epoxy resin and make a second winding with more tape in the other direction. In the picture, dabs of resin thickened with fillers can be seen: these are to ensure the tape beds down snugly over the damaged area.

Again, ensure that the second winding is well impregnated with resin, and when it is fully cured trim any rogue fibre ends prior to giving it a light sand down to smooth the surface for the final stage.

To provide a comfortable, soft grip, Rubbaweld self-amalgamating tape was then used. The tape used was 25mm wide, a width which would allow it to wrap around neatly.

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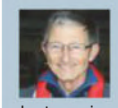
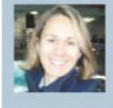
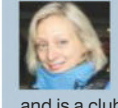
THE PBO TEST TEAM


Ex-merchant navy officer Alex Bell sails a Bénéteau First 305 and lectures in maths and engineering at Southampton Solent University.

Bob Porter built his sailing credentials with Flying Fifteens on inland waters and has returned to the South Coast to widen his cruising experience.


Adriana Mattei is a technology consultant, has sailed Lasers since the age of 12 and now sails a Malö 42.

Chris Savage is a student at Southampton Solent University completing his Yacht and Powerboat Design course.


Oksana Razina works at Southampton Solent University and is a club racer of yachts in the Solent in the role of navigator.

7 snatch blocks

TESTED

Alex Bell and a PBO test team compare a variety of snatch blocks for ease of operation, adaptability and efficiency

Snatch blocks are versatile devices which find their way on to many sailing boats and which are very useful to have on board. They are designed so that a line or sheet can be threaded through the cheeks of the block without having to feed the end through. This requires the block to be opened up and then closed so the line can be attached.

There are various applications for snatch blocks, three very common ones being:

■ Barber hauling a genoa sheet. The snatch block is attached to the sheet, and the block has a separate line attached which needs to go through another block secured to the toerail or a deck eye. The line end can then be tightened on a winch and the angle of the sheet adjusted in a way that is used to open up or close the gap between the genoa and the mainsail.

■ Controlling a spinnaker: the snatch block can be used on the guy to keep it at the maximum beam of the boat, thereby preventing the spinnaker pole from being forced against the forestay when using the spinnaker to windward.

■ For the spinnaker sheet as a barber hauler to keep the spinnaker under better control, helping to prevent rolling when dead downwind.

Other uses include temporarily replacing defective halyard blocks, attaching to a sturdy pulpit or pushpit to reduce chafe from anchor or mooring lines, and rigging emergency steering with buckets.

Snatch blocks come in different sizes in relation to the diameter of the sheave (pulley). The larger the diameter of the sheave, the larger the diameter of the line the block will take. For this test we chose a sheave diameter between 48-66mm, which covers line diameters between 12-19mm.

Another difference is the method of attachment. There are generally three choices:

■ Snap shackle (the most common).
■ D-shackle with screw pin, or pin with circular split pin.
■ Dyneema soft connector.

Since the snap shackle is the handiest method of attaching the block, we chose models with this attachment method when available.

Anatomy of a snatch block

Two cheeks support the sheave, which can have a plain journal bearing or ball/roller bearings. The cheeks must be strong enough to take the applied load, but covered in a soft material so the block will not damage any surface they may rest against.

At one end will be the snap shackle or a D-shackle, and the other end will often have a 'becket' – a steel pin or ring onto which either line or shock cord can be attached to hang the block upon when not under load.

Different manufacturers employ different solutions to give access to the sheave: these include swivelling one cheek about the bearing axis (Antal), hinging the snap shackle end ('latch' type, used by Barton, Lewmar, Ronstan, Schaefer and Wichard) or hinging one cheek (Holt). Ideally this operation should be possible one-handed, to follow the old maxim: 'one hand for the boat, one for yourself'.

Some blocks are available with a trunnion bearing (Lewmar, Wichard, Antal): this allows the block to both rotate and swivel through 180°, while the design of the Holt block allows the same movement through 90°. This function enables the blocks to be fastened directly onto a toerail, otherwise they need to be attached via a D-shackle.

Latch-type opening

Designs differ: this well-made Schaefer block features a hinged snap shackle and 'latch'

Antal's offering featured one cheek which rotated, locating on a ball bearing...

...while Holt/Nautos had one cheek that hinged open, securing on a spigot

How we tested them

The test was conducted in two parts, the first of which was a check on the bearing friction. This was carried out by running a line over the block and suspending 30kg weights on both ends. With the weight hangers, we had a total load of 61kg on the block.

We then measured the force required just to get the pulley to turn using a spring balance and monitoring it throughout the length of the pull – discarding the figure that represented the initial force required to get the sheave moving and taking an average of the time taken in seconds. This represents the friction force in the block. During these tests we checked that the blocks did not spring open in any way.

For the second part, our team had to assess the blocks from an opening and closing point of view. This required a combination of experienced snatch block users and those unfamiliar with the process, encompassing a large variety of hand sizes and strengths, to gauge how easy it was to attach the block to a line. We let them practise once, then timed how long it took them to reeve the block onto a line, taking an average of five goes. This showed up some differences, with certain testers struggling to close or open some of the blocks, while others found them as easy as pulling a pin.

Some blocks had cushioning 'non-slip' cheeks to stop the block damaging the deck and also to stop it disappearing over the side, so we checked to see how easily each one could slip across a table to simulate a deck.

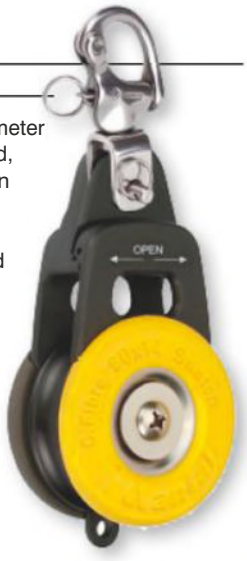
We suspended a total of 61kg from each block and measured the bearing friction

Snatch blocks on test

Antal Mini

PRICE: £215.78

Contact: www.antal.it



Comes in five sizes, from 32mm to 120mm-diameter sheave. The model tested (60mm) features hard, Teflon-coated, anodised aluminium construction with rubber side protectors, a composite fibre main bearing and double side ball bearing. All models have a cheek plate that revolves around the sheave axle, allowing the block to open. A safety pin, which engages automatically on closing, stops the block from opening accidentally. There is a becket ring for the hanging line. The block can be attached with a Wichard snap shackle, a D-shackle or Kevlar/Spectra line. This proved very popular on test as the block was easy to open and close: the distinctive yellow cheek identifies the one to be opened.

Holt Nautos

PRICE: £159.96

Contact: www.holt.eu

This has a 'hinge' opening and comes with either a snap shackle or loop line attachment. Machined from hard anodised aluminium alloy, the side plates are covered with a soft thermoplastic elastomer to protect the decks. This works very well on one side, but the opening button protrudes on the other cheek. The serrated orange button, which requires sliding towards the hinge, allows the entire spring-loaded cheek to hinge away, revealing the sheave. There is no hanging becket. This was the only block tested with the safe working load (SWL) marked on the cheek. Besides the swivel action of the snap shackle there is about 100° of lateral movement, but this is resisted by the snap shackle nut, which is too deep. Adriana found opening it easy with warm hands, but felt it would be more difficult with cold fingers. Closure was very easy.

Barton Medium

PRICE: £99.37

Contact: www.bartonmarine.com

Four sizes are available, accepting lines up to 16mm with sheave sizes of 35, 45, 48 and 57mm diameter. The range features a choice of stainless or chromed bronze snap shackles or a stainless steel D-shackle. The cheeks are a hard plastic with stainless steel supporting straps. Only rotation of the attachment shackle is permitted. Opening is of the latch type, the action controlled by fairly soft rubber blocks which make opening and closure very easy. This can be done with one hand, but the latch needs to be positively pushed into the closure position. Adriana found the opening and closing action very gentle on the fingers.

Lewmar Size 1

PRICE: £154

Contact: www.lewmar.com

This comes in two sheave sizes, 66mm (as tested) or 80mm. The 80mm can be either a stainless steel bearing with a Delrin sheave (size 2), same as for the 64mm, or a needle roller bearing (size 3) with an aluminium sheave. Soft synthetic rubber cheeks protect the deck and block from rough treatment, and the cheeks protrude above the bearing nuts. All models come with the Synchro snap shackles and have a trunnion bearing, while the latch action is resisted by soft rubber blocks. The block can be easily dismantled for cleaning or replacement parts. Adriana found the block easy to open and close one-handed, and this was Bob's favourite: he liked the positive closure.

Harken Trunnion

PRICE: £407.90

Contact: www.harken.co.uk

This is available in two models, with or without trunnion, and features low-friction roller/ball bearing sheaves and a unique push-button latch for one-handed operation. Urethane side plates prevent damage to decks, spars and cabin houses. An integral bail allows blocks to hang from lifelines with shock cord. Snap shackles attach to pad eyes and bails, while trunnion shackles attach to toerails and other fixtures. Not available for the test.

Ronstan Standard and Trunnion

Standard – PRICE: £129.89 Trunnion – PRICE: £151.67

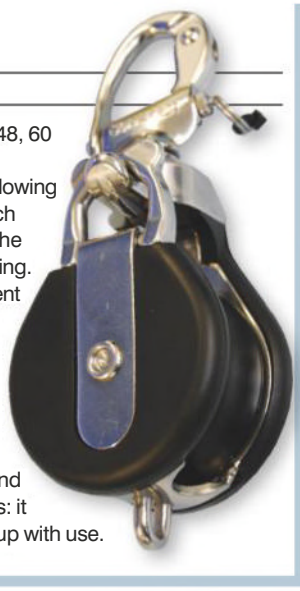
Contact: www.ronstan.co.uk

This is available in two versions. The standard snap shackle head allows the block to swivel through 360°. Soft resilient cheeks reduce clatter and protect gelcoat and painted surfaces, but do not protrude sufficiently beyond the side straps and bearing ends to provide full protection. An attachment point (becket) is provided for a shock cord hanger. Meanwhile, the trunnion snap shackle provides the same swivel action and additional articulation from side to side. The trunnion bearing is incorporated into the snap shackle release pin mechanism and angled to the pin axis. The latch action is stiffened by hard rubber on the latch, but not on the snap shackle side. Two lugs on the latch assist opening. Adriana found the block difficult to open but easy to close.

Schaefer

PRICE: £300 approx

Contact: www.schaefermarine.com



This comes in three sheave diameter sizes, 48, 60 (tested) and 76mm. The snap shackle head attaches to the block with a ball joint swivel, allowing 360° rotation with a 15° tilting action. The latch action is resisted by hard rubber integral to the cheeks, and two lugs on the latch assist opening. The cheeks do not project sufficiently to prevent the end of the sheave bearing from catching on the deck. The attachment becket (or bail) is a D-shaped ring. The extra-wide sheave rotates on a Nomex/Teflon and epoxy-coated glassfibre self-lubricating bearing. In use the Teflon migrates from the bearing, providing friction reduction with each rotation. Adriana and Bob found it stiff to open even with both hands: it closes more easily, and hopefully may ease up with use.

Wichard

WB-34500 – PRICE: £114

WB-35500 – PRICE: £182.40

Contact: www.proboat.co.uk

This comes in two sizes, both with sheave diameter of 55mm but capable of taking line up to either 12mm or 18mm diameter. Both come with a trunnion bearing. The elastomer-moulded cheeks make them shock- and scratch-resistant, although the sheave bearing ends just protrude. Each version is offered with either a snap or bow shackle. To open it, a spring ring is pulled on the bearing point of one cheek: this retracts a pin which runs through the sheave bearing, releasing an arm which hinges from the other cheek. The additional swivel (trunnion) bearing allows the blocks to articulate through 180° as well as a 360° rotation perpendicular to the axis of the bearing. Both versions have a hanging becket. Adriana and Oksana found this block, the fastest on test, very easy to operate.

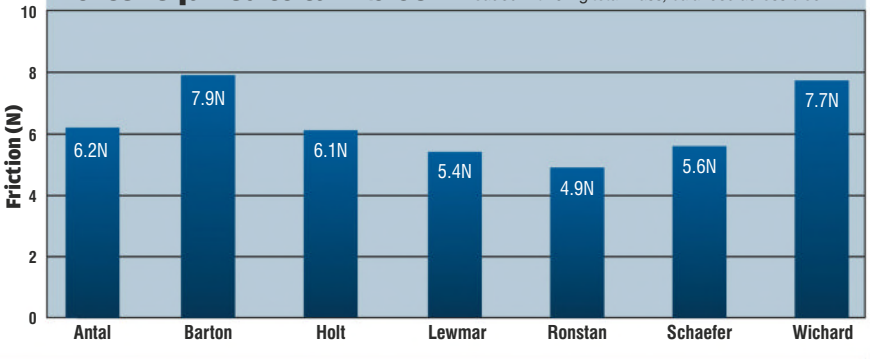
Average open/close times

Average time (sec)

Tester/ Block	Adriana	Bob	Chris	Oksana
Antal	1.13	2.35	2.77	1.44
Barton	2.46	1.5	2.19	1.81
Holt	2.34	1.7	1.43	2.9
Lewmar	1.78	1.34	1.89	2.2
Ronstan	2.68	1.54	1.99	1.95
Schaefer	Couldn't	Couldn't	3.8	3.46
Wichard	1.57	2.29	2.12	1.17

Force required to turn block

Loaded with 61kg total mass, balanced across block



Snatch block specifications

Figures as quoted by manufacturers

Manufacturer	Antal	Barton	Holt	Harken	Lewmar	Ronstan	Ronstan	Schaefer	Wichard	Wichard
Model	Mini	Medium	Nautos	Trunnion	Size 1	Standard	Trunnion			
Part no	9060SN	90401	92910		1981 10600	RF6720	RF6721	07-99	WB-34500	WB-35500
Sheave dia (mm)	60	48	60	64	66	64	64	60	55	55
Bearing type	Double side ball	Journal	Journal	Roller/ball	S/S journal	Journal	Journal	Plain journal	Plain journal	Plain journal
Safe working load (kg)	1,300	550	1,200	1,588	1,135	1,000	1,000	1,700	900	1,500
Break load		1,100	2,500	3,175	2,500	2,000	2,000		1,300	2,500
Max line dia (mm)	14	16	16	16	14	12	12	19	12	18
Weight (g)	260	378	422	564	480	480	510	595	260	410

PBO verdict

We were surprised at the range of snatch blocks available and the different methods of opening them to attach a line. Prices also varied considerably, ranging from just under £100 to over £400. However, for your £100 you get a safe working load which is half that of the other blocks tested. All the blocks, except the Antal, had plain journal bearings which keeps the cost down, but increases the friction in the bearing.

Like all blocks, it is important to keep bearings of any type as free from salt as possible. This problem is, if anything, worse with snatch blocks as they have additional mechanisms which can jam. Regular flushing with fresh water will help keep friction down and your block working smoothly.

Each team member had their favourite blocks; the most popular for ease of operation were the Antal, Lewmar and Wichard. The Barton also appeared in two top-three choices. Those blocks with the extra degree of freedom offered by a trunnion bearing have an advantage when attached to a toerail, as they give more choice of location: otherwise, an extra shackle would be required.

Friction-wise, the Ronstan followed by the Lewmar win the day, with the Schaefer also performing well. On price, the Barton gets the budget award and the Lewmar is reasonably priced. So, joint best-buy rosettes go to Antal, Lewmar and Wichard.

Fuses to circuit breakers: an easy upgrade

STEP BY STEP

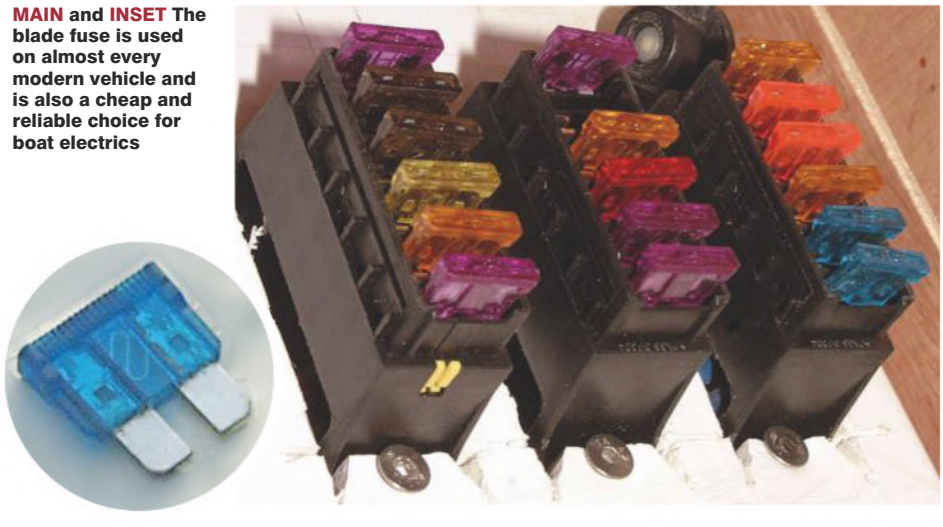
Tony Davies demonstrates how to construct a holder system that can accommodate standard fuses or circuit breakers

A large proportion of boats still use fuses to protect the electrical circuits, and for the sake of simplicity this has always been the best choice – while the low cost is another important factor.

However, as technology moves forward it is often the case that prices fall as well. A case in point is the blade fuse: these are almost universally used on vehicles nowadays, which means they are cheap to buy and easy to obtain. In recent years, a direct replacement circuit breaker has also been introduced, making the upgrade from fuses to breakers both easy and affordable.

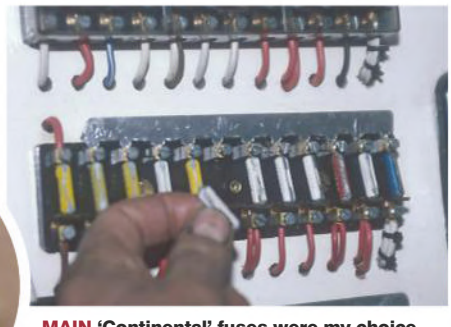
The blade fuse is used on almost every modern vehicle and is also a cheap and reliable choice for boat electrics. A lot of boats still use the older-style 'continental' fuses, and these were always my choice with previous boats.

I did however find that if the ends are not cleaned as part of the annual service a layer of corrosion between the contacts causes a high resistance, which produces heat and melts the body of the fuse. On my present boat I opted for blade fuses: these are also available as 'glow-blow' fuses that illuminate when the fuse has blown, giving an instant indication of where an electrical problem might lie. I then discovered that blade circuit breakers (which are a direct replacement for blade fuses) were available, so I resolved to go the extra step and install these from the outset. As this is a renovation project I chose the fuse holders to suit the layout of the electrical locker.

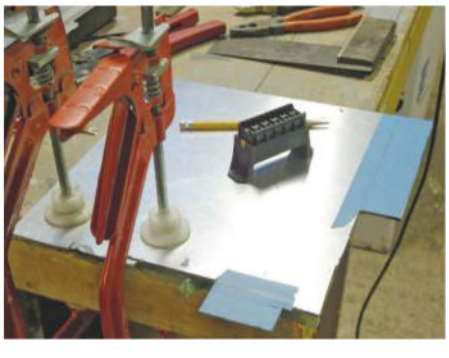


MAIN and INSET The blade fuse is used on almost every modern vehicle and is also a cheap and reliable choice for boat electrics

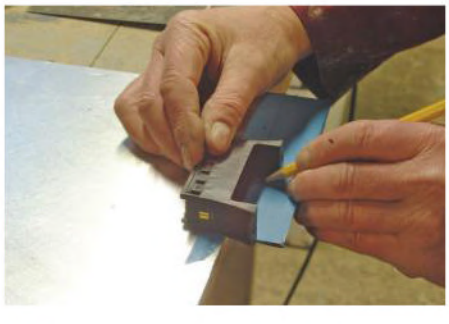
I like to route cables behind an opening panel with the fuse holders on the front and the cables passing through the panel: this gives an uncluttered look to the panel and keeps all the cables tidily hidden. If you decide to upgrade to these breakers but have older-style fuse holders it is not generally very difficult to change the fuse holders as long as you carefully label every cable before it is disconnected.



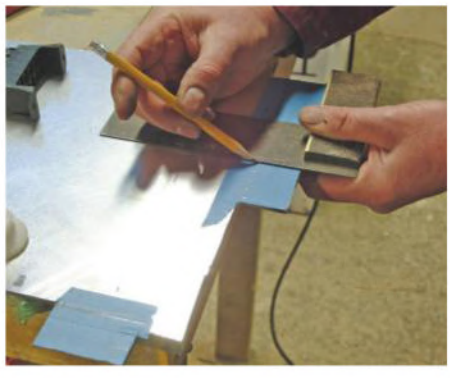
MAIN 'Continental' fuses were my choice with previous boats. INSET But I found that if the ends weren't cleaned annually, corrosion between the contacts caused high resistance which created heat and melted the fuse body



1 Here are the basic materials of my fuse/breaker holder system – my chosen style of fuse holder and a sheet of aluminium that will cut into a bus bar to fit the holder.



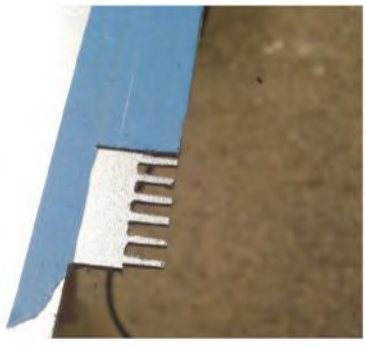
2 Having placed some masking tape onto the edge of the aluminium sheet to make pencil lines more legible, I began marking out the bus bar by first marking the length to fit between the 'feet' of the fuse holder.



3 Next I marked the position of each crimp terminal to correspond with the male blade in the fuse holder.

4 This was followed by marking the length of the crimp terminal's body to ensure I would not cut too deeply into the aluminium.

5 Now I could begin carefully cutting out the 'legs' using a thin disc in a mini grinder. You might find a hacksaw equally effective.



6 Not the most elegant of cutting jobs, but perfectly acceptable from an electrical point of view!

7 The next job was to force the crimp terminals onto the legs as they are a tight fit. Note that it is impossible to use a crimping tool as the terminals are too closely spaced.

8 Now I was ready to cut out the completed bus bar.

9 As the crimping tool could not be used I simply placed the assembled bus bar into the vice and crushed the terminals onto the legs in one go. They were tight when being fitted, so this final step ensures they will never come loose and will offer a first-class connection.

10 The main part of the bar was clamped in the vice and each individual leg carefully bent, using finger pressure, into a 90° bend.

11 The completed bus bar was now ready to fit into the fuse holder.

12 The terminals were aligned with the male blades, ensuring they were all properly located into the terminals – at which point the assembly was pushed firmly home, making a reliable connection on each circuit.

13 I then drilled a hole through the bus bar to take the main power feed from the back of the panel and into the bus bar.

14 The completed holder, ready to take either standard or 'glow-blow' fuses or blade circuit breakers.

15 In this case the holder will be carrying circuit breakers: I bought these breakers from eBay for less than £3 each, but they vary quite dramatically in price so it is worth shopping around.

Mooring to shore in the Med

Over the years, David and Ann Berry have devised an optimum technique for taking lines ashore when mooring their Moody Eclipse in the Med: here they explain the process

For this technique, you'll require 50m of rope, a strop of old stuff and a snap shackle to attach the strop to the rope

The first time I tried tying to the shore in the Mediterranean, I fastened a rope around my waist and swam towards the land. I only did that once, and it nearly killed me. So, is there a best way to take a rope ashore? We think we've developed the optimum technique over the years. It has a basis in science too: the fundamental philosophy is the same as is used in wire-guided missiles and torpedoes to avoid the drag of moving wire.

■ You'll need the following: 50m of rope; a strop of old stuff to go around your chosen tree or rock so that you don't abrade your best rope; a snap shackle to attach the strop to the rope; PMR radios – these are so, so useful!

■ **Whoever is best at controlling the yacht should be on the helm. Don't be chivalrous: if that means the woman rows the dinghy, then so be it – it will all save energy in the long run. We've watched a man gallantly rowing for the shore while his less-than-expert wife ended up ripping out the bow anchor and towing him out to sea.**

■ Lower your dinghy well before you need it, then tow it. Decide whereabouts on the shore you want to attach the stern rope then pick a spot to drop the bow anchor. This needs to be upwind of the point on the shore if possible: getting a line ashore in a crosswind is achievable, and we've done it many times, but it's tricky and definitely not for a first attempt. The best bow anchor placement is 90° from the shore in front of the place to which you want to tie. A common fault at this stage is to drop too close to the shore: you need your chosen distance to the shore, say 25m, plus your boat length plus the radius to the anchor (not the scope).

■ **Forget all about the shore and anchor into the wind as you normally would. Dig the anchor in and let the yacht swing. Take a breath.**

ABOUT THE AUTHOR

Regular PBO contributors Ann and David Berry have owned their Moody Eclipse *Aderyn Glas* since 2005 and have sailed her in the Ionian since 2009. They are currently based in Preveza.

Attach the rope to a rock or tree with the strop

Don't be chivalrous: whoever is best at controlling the yacht should be on the yacht's helm

■ Pull the dinghy alongside and, starting with the end which will attach to the yacht, flake the rope backwards and forwards across the dinghy floor: don't coil it and don't twist it. Big figures-of-eight with large crossing angles will ensure the rope pays out smoothly later by cancelling out right- and left-hand twists. It's fundamentally important to get this right, and the time taken here will be far less than that taken trying to untangle a rats' nest of rope in a drifting dinghy later. The end on top will be the end to attach to your tree: snap or tie one end of the strop to it. Don't forget the radios.

■ **With all the rope in the dinghy and, most importantly, not tied to the yacht, row ashore and attach the rope to your tree or rock with the strop. At this point the yacht is essentially free to do whatever it likes, but I generally keep the stern pointing somewhere towards where Ann in the dinghy is working. If the yacht is head-to-wind in the ideal situation this isn't hard, but if there's a crosswind element it can be a battle.**

■ Now comes the fun bit. The dinghy and yacht have to arrive at the same point at the same time, so row the dinghy from the shore towards the point where the two will meet while the yacht does all the manoeuvring needed to reverse to the same point. The rope in the dinghy should run out easily, and at no time is the rope dragged through the water – the common mistake most people make. We also have much more rope than the distance to the shore, at least a factor of two, which allows for it sinking and for inaccuracies. Ann usually takes another line to bend on just in case.

■ **On a good day, the two boats come together nicely and the rope is handed aboard the yacht for wrapping around a winch and hauling the stern into position. On a tricky day, we've resorted to throwing our normal stern line from the yacht to the dinghy for knotting to the shore line. As soon as the yacht is attached to the shore line the dinghy needs to clear out of the way.**

■ Haul the stern around using the winch. Don't motor. We watched one yacht which was otherwise quite competent reverse towards the shore to take the load off the line and prop-wrap it.

■ **Tighten the shore line then check the bow anchor, check the stern line again, add another if you wish and maybe a marker buoy halfway between the yacht and the shore – and that's it.**

■ Removal is easy. At the right moment, the skipper on the yacht takes the tension off and the person ashore removes the rope from the tree. The yacht swings to the bow anchor and the skipper pulls the dinghy back from the shore, flaking the rope onto the deck.

If swinging is likely to impede other boats, then shorten the bow chain.

Apart from PMR radios, which to my mind greatly reduce arguments on a boat, the other useful tool in manoeuvres like this is a remotely-controlled electric winch.

On a good day, the rope is handed aboard the yacht for wrapping around a winch and hauling the stern into position

You can add a marker buoy halfway between the yacht and the shore

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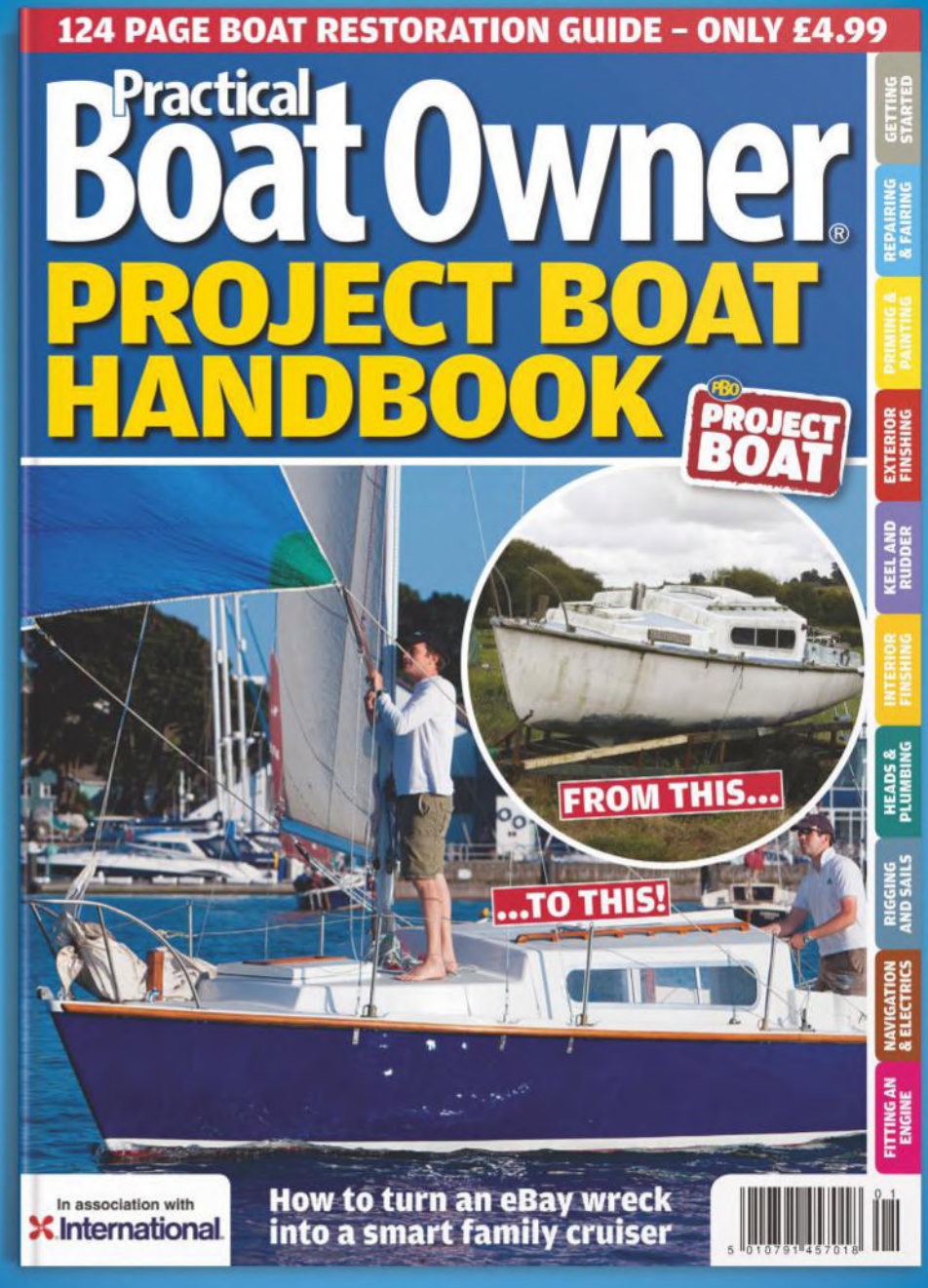

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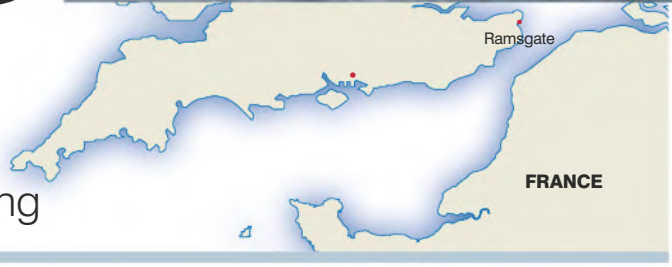
Ramsgate

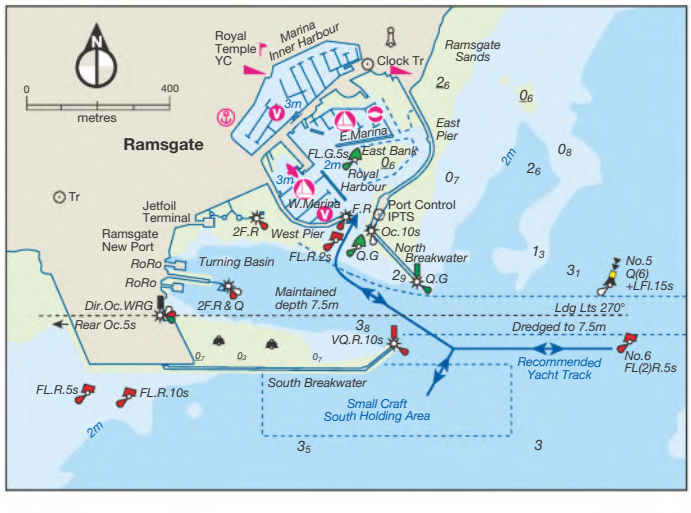


Cameron Snell makes his way into the port of Ramsgate, with a harbour which can officially claim to have been fit for a king

Ramsgate Harbour has the unique distinction of being the only harbour in the UK which has been awarded the right to call itself a Royal Harbour, with the honour bestowed by King George IV in 1821.

Ramsgate provides a gateway to the east and south coasts of the UK, plus Europe and its canal systems: the ports of Dunkirk, Calais and Boulogne are all within a 50NM range of the port. The outer approaches to Ramsgate are clearly defined in the Port Of Ramsgate's website, www.portoframsgate.co.uk, one of the most informative and concise sites of its kind.

Ramsgate has a clearly defined approach channel which was once utilised by the Sally Line car ferry service to Dunkirk. This service ceased operation in 2013, but in contrast to this, high-speed wind farm support boats now buzz in and out of the harbour on an almost 24-hour cycle, making it crucial that small craft continue to use the recommended 'yacht track' that lies parallel to the south side of the approach channel.

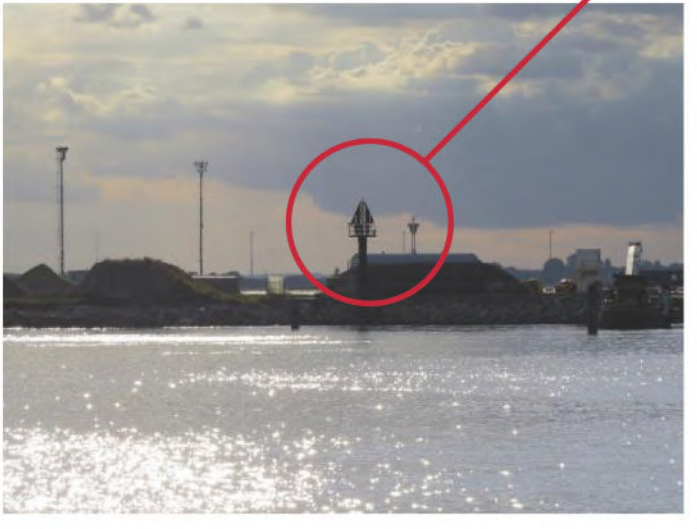


Wind farm support boats buzz in and out of the harbour on a regular basis

Skippers are required to call Ramsgate Port Control on Ch14 for permission to enter the harbour. You may be instructed to proceed to the waiting area at the south of the southern breakwater prior to entering the harbour. A pair of triangles with a central white line create a transit on 270°T if you enter using the main channel.

1 The outer breakwaters are marked with an Oc.G and a VQ.R on distinct beacons at the end of each wall.

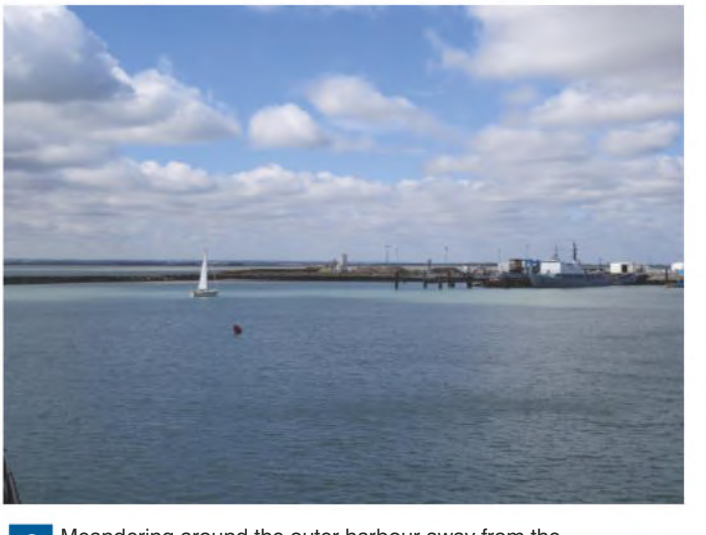
2 The walls are quite low-lying, which makes them difficult to spot when the sun is low in the west or if the sea has built up. This view is approaching directly from the main channel on 270°T.



3 The shape and light of the transit triangles can be distinguished from the background of commercial port lighting and posts. At night, the forward light is sectored WRG.

4 Once inside the outer harbour, single red and green buoys – West Pier Buoy (red) and Harbour Buoy (green) on your starboard side – mark the route into the Royal Harbour. Two distinct harbour walls complete the approach line, with the tall lighthouse on West Pier displaying a fixed red at night. Call Ramsgate Port Control on VHF Ch14 for permission to enter Royal Harbour.

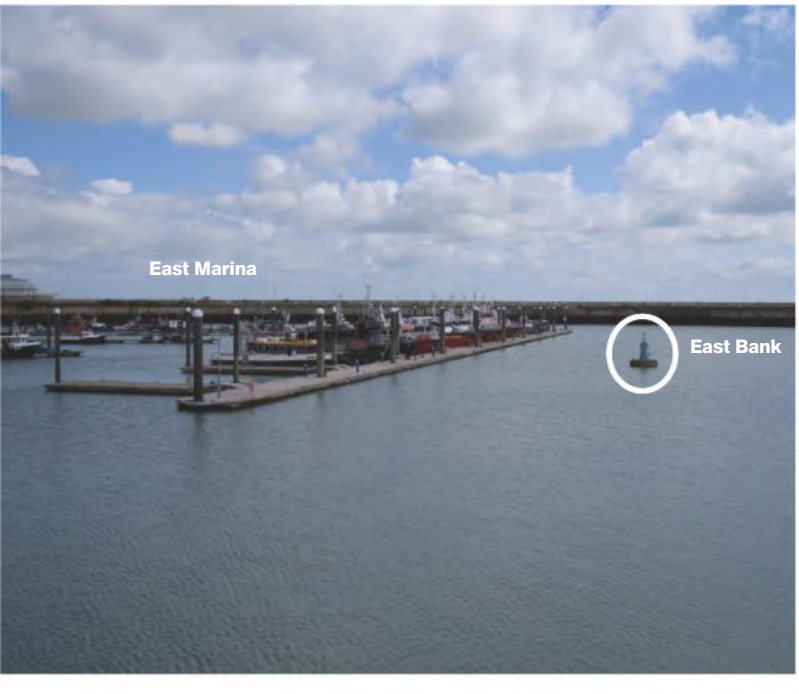
5 Traffic lights are displayed on top of the cream-painted port control building at the base of the northern breakwater ('3VG' to enter, or '3VR', no entry). If a flashing orange light is displayed, it means a ship is manoeuvring and you must not enter or leave harbour.



6 Meandering around the outer harbour away from the recommended yacht track, as detailed on the harbour chart, may result in grounding, as this yacht discovered! The port regularly conducts surveys, and these can be found on the 'hydrographic surveys' link on their website.

7 Passing between the harbour walls will bring you into the Royal Harbour. This was once the original harbour, prior to the construction of the outer breakwaters and the ferry terminal. From here, call Ramsgate Marina on Ch80 for berth allocation. The Royal Harbour is divided into three sectors: West Marina, East Marina and the Inner Marina. All three are controlled by Ramsgate Marina (Ch80). Ramsgate Marina is owned and operated by Thanet District Council, a unique feature nowadays considering how globalised marina ownership has become.

8 It is most likely that you will be directed to West Marina, which lies sharply to port inside West Pier. Visitors' berths will be found on pontoons G and H, which are the first row as you enter. During the winter you may be instructed to take any vacant berth, unless they are marked 'reserved'.

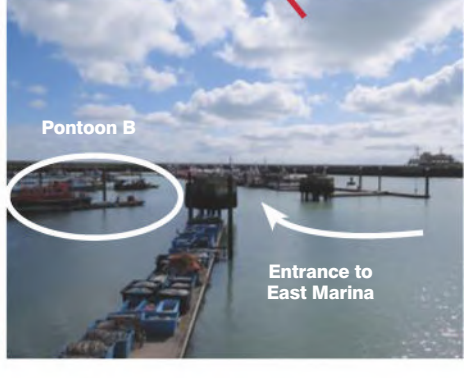


9 At the top of the bridge is a small Portakabin: this is a secondary 'staging post' for the marina office. The main office is further along the quay, next to the lock. During busy periods you may be directed to East Marina: this looks and feels like the commercial berths for the locals.

You may spot a solitary green buoy (circled in photo) that lies in a large open expanse. Do not be drawn toward it. The buoy marks the edge of a drying bank called East Bank. It is unlikely that you will need to take this route, as it only leads to commercial berths and the slipway. If you take this route, pass between the buoy and the pontoon.

10 For East Marina, proceed toward the lock entrance until you see a pair of concrete dolphins to starboard. Pass between the dolphins to enter East Marina. Visitors' berths are on 'B', the second pontoon to port.

Many commercial vessels and fishing boats occupy this marina, so beware of the traffic.



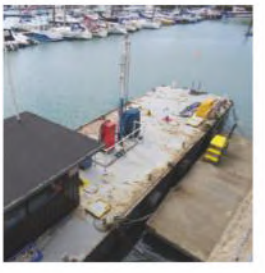
Inner Marina

The Inner Marina is accessed via a lock which opens 2 hours either side of HW. This marina is primarily for permanent berth holders. However, special arrangements may be available for long-term visitors via the marina office.

1 Entry and exit procedures to the Inner Marina: a traffic light system controls the lock. Ramsgate Dock Office (located in the wooden building on the port side of the lock) may be contacted on VHF Ch14 on approaching or before leaving the inner harbour.

2 A modern building, housing the comprehensive amenities, is located in the western corner of West Marina. There are additional, smaller toilet blocks on West and East marinas.

3 Petrol and diesel is available from the fuel barge (currently undergoing refurbishment: a temporary facility is in place) on the end of Commercial Quay, beneath the RNLI station in West Marina. Contact the dock master on Ch80, summer hours 0700-1900, winter 0800-1800. Don't make the mistake of trying to refuel at the commercial fuel berth (pictured right) next to the lock!



Getting out and about in Ramsgate

The port of Ramsgate is an individual and vibrant place: its intoxicating atmosphere envelops you as you meander around the quayside arches directly outside the marinas.

Visiting yachtsmen are welcomed at the Royal Temple Yacht Club, prominently located above the harbour. The club plays host to the annual Ramsgate Week regatta (26-31 July 2015), an alternative to Cowes Week.

There is an abundance of eateries throughout Ramsgate,

catering for all tastes. If you're prepared for a long walk, the Royal Harbour Brasserie beneath the port control building at the end of East Pier offers a comprehensive menu combined with stunning views in all directions.

USEFUL CONTACTS

Port Of Ramsgate
www.portoframsgate.co.uk, email: portoframsgate@thanet.gov.uk

Harbour office
Tel: 01843 572100

Marina office
Tel: 01843 572110, dock master Ch80, dock office Ch14

Ramsgate Port Control
Tel: 01843 572112, VHF Ch80

Royal Temple Yacht Club
Tel: 01843 591766

The entire range of Cameron Snell's video pilotage guides is available to view online or buy on DVD from www.harboursonfilm.com

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Great ideas and tips from PBO readers

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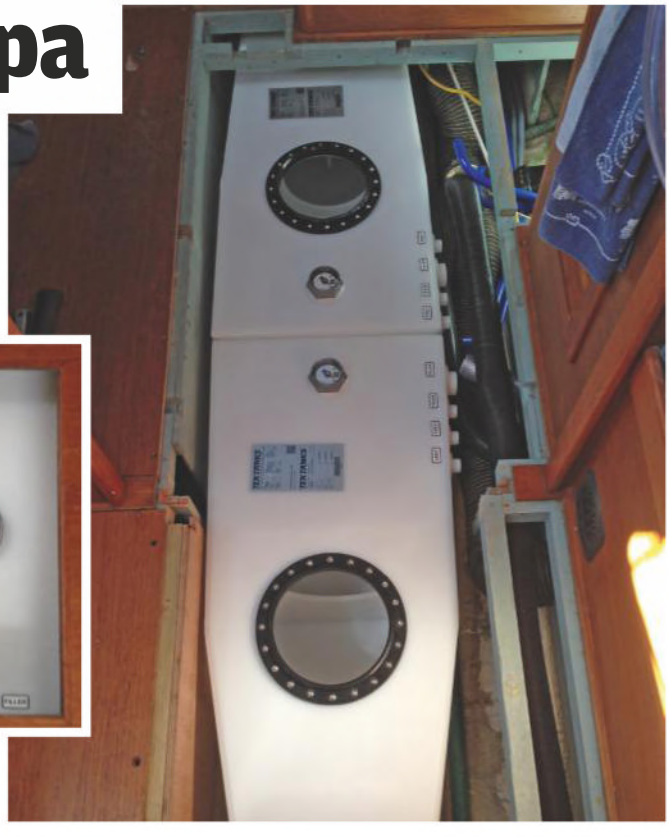
Tanks for the cuppa

Lindsey Blow organises the removal of his boat's unusually-shaped, snug-fitting stainless steel water tanks and the installation of custom-built replacements



ABOVE The new gauges are visible through the floor hatch RIGHT The custom-built tanks are made of 10mm-thick polyethylene

Towards the end of last season we noticed that our tea was tasting horrible, so we vowed that cleaning the water tanks would be a priority while our Rival *Sally* was out on the hard over winter. However, a more pressing problem was the water pump, which was failing to turn off when the tap was closed. To test that the new pump was working correctly, we ran a hose across the boatyard and put a few inches of water in the forward tank: but by the next day the tank was empty. We had a leak! So that was why were pumping the bilge every day.

Sally's original tanks were stainless steel and stored on the sole plate above the keel. Liftsing the floorboard made access to the top of the tanks very good, and there were a couple of large inspection hatches held on with bolts. The old swing gauges no longer worked reliably as the cork on the end of the wire tended to get stuck behind a baffle when the boat was heeled, so the gauges would read nearly full when the tank was in fact empty.

We started investigating options for replacing the old tanks, which each held over 200lt and were an unusual shape, fitting snugly into the sole plate above the keel. We considered flexible tanks but realised that these would only provide a short-term solution and, more importantly, would lose us a great deal of water capacity – so we would have to fit custom-built tanks.

We found a company called Tek-Tanks which would make strong plastic tanks to our design. We roughly measured our tanks and sent the details off for a quote. It was not a cheap solution but *Sally*, like all Rivals, is solidly built and we had decided that we would not compromise on quality.

Getting the original tanks out was tricky. While the tank itself would fit through the companionway with an inch to spare each side, the rigid spigots welded onto the side reduced this clearance to less than a handful of millimetres. The tanks were heavy with few handholds, and needed to be pushed at just the right angle to get them out.

Tek-Tanks required drawings to work from, but since they are an hour down the road from us they offered to base our new tanks on the old ones if we could deliver them. Once there we were welcomed by Sarah and introduced to Andy, who was going to make our tanks. There were some design issues that really mattered to us. *Sally* has a small hatch in the floor that, when lifted, shows the water tank gauges: this enables us to see the gauges from the filler position, and also means the switch panel is not cluttered with additional water gauge meters.

Therefore, it was vital that the new tanks had a gauge in the same place. The spigots on the side of the tank also needed to be roughly in the same places as the space at the side of the tank to route pipes was very limited, and this is where the design work came in. The new tanks are thicker than the originals and the spigots also take up more space, meaning the arrangement would require more room. With careful measurements to work out our constraints, and the Tek-Tank designers moving internal baffles around, we got the spigots and gauges in the right places.

Tek-Tanks drew up the design and sent it through for approval. With several tweaks back and forth we agreed a design and paid our deposit. As promised, the new tanks were ready four weeks later, so we drove over to collect them. They are made of 10mm-thick high-density polyethylene so they aren't much lighter than the old ones, but they have removable spigots which helps with the clearance going through the companionway. They fitted into the sole plate perfectly and are now connected up to the existing pipework, although we also fitted new filler and breather pipes. With the floorboards down, we can see the new gauges through the hatch in the floor. We have peace of mind, there's less bilge pumping and the tea tastes lovely!

The old tanks were an unusual shape. INSET The original swing gauges no longer worked reliably

Outboards to boot

Mike Saleh works out a stable way of carrying an outboard in the boot of his car

Mike Saleh's home-assembled outboard stand is sturdy and convenient

I keep my 3.3hp Mercury two-stroke outboard at home in a garage clamped into an outboard motor trolley. This keeps it vertical and allows me to move it around over short distances. I use it on a dinghy at Morston on the North Norfolk coast some 11 miles from home.

To get there I'd lay the outboard horizontally in the boot of my car, with the power unit on its back as recommended in the owner's manual, ensuring that the air vent and fuel supply were closed off. To stop it rocking over onto its side I placed it in a laundry basket, which also helped to lift the propeller off the floor of the boot and protect it from damage. But on the narrow, windy and bumpy country lanes where I live the engine would inevitably rock around, sometimes tipping the laundry basket.

I started to think of a better transport solution. Clearly it is safe to transport engines vertically and various tow bar options have been described, but it is much more convenient to simply lay the engine down horizontally in the boot of the car – most two- and four-stroke engines can be transported this way. So, I bought a wall mounting bracket from a hardware shop and an outboard bracket from a marine chandlers. The parts list was completed with four legs from an old aluminium ladder, screws and nuts, and assembly is as shown.

I have used the new stand all this season and it has proved to be sturdy and stable. There's a knack to loading the engine on to it, but it only takes a minute or so. The stand could also be simply modified to maintain the position of a power unit which has to be carried on its side.

Readers' Tips

BEEN BAG – IT'S NOW A SEAT

Re 'Old headsails? Don't bin them!' (PBO July), never mind old sails and bags – four grommets in the corners of a current sailbag makes for the most comfortable seat in the house. Antony from Bond Sails in Eastney very kindly put in the grommets for me – I wanted to find out whether or not the idea worked – and it has proved to be very comfortable even when heeled on a beat. Mind you, I'm not claiming that it was my idea: I originally read about it elsewhere.

Donald Heath

ENSURING A FAIRER OUTLOOK

I spotted a decent-looking brass barometer in a charity shop's 'everything £1' bin. I reasoned that I wouldn't lose much even if it didn't work – and, indeed, it didn't. Despite wildly fluctuating weather patterns, the needle stayed rigidly stuck on 'fair'. So, I put it in the bin: but then I thought, 'hang on, there must be another use for that'. So I retrieved it, looked around, and screwed it to my boat's cabin sole, next to the hatch. It makes a secure hold-it for small items such as my sunglasses and Dicky, the pet plastic parrot. It's also good for coffee cups and, if the pressure rises, even a G&T. A pound well spent!

Richard Barton-Wood

PUT A SLOT IN IT

When one of the valves on my inflatable dinghy broke I bought a replacement from my local chandler. I had to break out the faulty valve assembly after undoing the outer collar/nut to remove the larger part from inside the tube. Then the larger part of the new assembly, which has a collar/flange, had to be pushed through the hole in the tube so that the flange was on the inside, and then the outer collar nut had to be tightened on the outside to make it airtight.

Sounds straightforward enough, but getting the thing through the hole in the tube was impossible even with plenty of soap as the hole could not be stretched enough for it to pass through. My solution was to cut a slanted slot about 4mm wide in the large collar, about halfway across it, leaving enough surface to seal later against the rubber. Then, with the aid of a pair of water pump/expanding pliers, I pushed the thing through the hole while turning it so that the slot acted like a screw thread, and the job was done easily and quickly.

Finally, I fitted the outer nut/collar and tightened it to effect an airtight seal. It's a pity the assembly doesn't come with the slot already there for ease of fitting!

David Mead

AN EFFORTLESS WINDLASS

My new boat, a Trident Voyager 40, has an electric windlass, which should mean I will not need to be on the foredeck to heave the anchor back on board when leaving a secluded anchorage. The windlass is vertically mounted, with its own 12V battery in a forward locker, and is operated by two footswitches. I started thinking about how I could raise the anchor from the cockpit helm position, and realised that a two-channel wireless remote control kit from Maplin would do the trick.

The Velleman VM130, costing £40, has two separate output relays, each of which can be set to either timer or push-button operation. Wiring these relays in parallel with the footswitches, which themselves alter the mode of a reversing solenoid, should give the desired result.

Andy Phenna

Tiller locks TESTED

Ben Meakins compares three tiller-locking devices for effectiveness, ease of set-up and user-friendliness

Short- and single-handed sailing is made much easier with some way of securing the helm so you can do other things. Autopilots are perhaps the best solution, but they are expensive and can draw too much power for some small boats. Wheel-steered boats generally have a friction lock on the wheel boss to secure the wheel, but tiller-steered boats generally have had to look to lashing the tiller to make an escape from the helm.

That's where tiller-locking devices come in handy. They vary in design, price and function, but at their most basic level they will hold the tiller in one place, allowing you to quickly nip off and tie on a fender, adjust a halyard or, if you've set the boat up properly, make a cup of tea.

How we tested them

We mounted all three devices on the spare tiller for my Impala 28 and headed out into a brisk 15- to 20-knot south-westerly breeze in the Solent. We engaged each tiller-locking device in turn, looking at how easy it was to set up, engage and disengage each one, and what each one felt like to use. We set the boat up so that the sails were balanced nicely before allowing each one to steer for a while.

Tiller locks on test

Davis Tiller Tamer

PRICE: £34.95

Contact: www.davisnet.com

The Davis Tiller Tamer is screwed to the top of the tiller and comprises an injection-moulded base with a friction screw mounted on a spring, which adjusts the friction in the line. A line is installed, running from points at 45° to the tiller: it runs over a sheave and through two fairleads on the Tiller Tamer. The manual recommends that the bitter ends of the line are secured in two cam or clam cleats so that it can be easily released in an emergency. Unlike the other products tested, you can adjust the resistance, which means you can potentially leave the tiller for a few minutes and easily fine-tune it if necessary.

A disadvantage of the design and being able to adjust the tension is that it can take a short while to unscrew the knurled knob and regain control of the tiller – not more than 10 seconds, but that could be enough to make a difference in an emergency. This accounts for the stipulation that quick-release cleats are used for the bitter ends. The design was also prone to catching lines and clothes, but the Tiller Tamer can also be mounted on the underside of the tiller, which would help solve this problem.

Tiller locks on test

Midshipman II Tiller Lock

PRICE: £34.95

Contact: www.seasure.co.uk

Seasure make the Tiller Lock, which comprises an aluminium body with a sheave and a clamping lever. A line is supplied with a rubber snubber and a small cleat, which allows the line to stay tight at all times. The instructions say that you should mount the Tiller Lock on the underside of the tiller. This we did, and found that it was effective to use, although unless the line was as tight as possible, it was liable to fall out of the sheave when the locking lever was disengaged. This didn't happen when mounted on top of the tiller.

In use, the lever was simple and easy to operate, and held the tiller firmly.

TillerClutch

PBO BEST ON TEST

PRICE: From £49.36 ($77.59) + P&P

Contact: www.wavefrontmarine.com

We found this product online. Made in the USA by WaveFront Marine, it's a similar idea to the Tiller Lock, but in a much smaller package. Made from anodised aluminium with stainless fastenings, it's designed to be screwed to the handle end of the tiller so that the clutch lever can be operated with one hand while steering normally. A 5mm line is supplied, and, like the Tiller Tamer, is designed to be cleated at each end for quick release.

In use, we found the TillerClutch to be the easiest and quickest to flick on and off thanks to its mounting location and the design of the lever. It gripped the line well and the captive line was in no danger of falling out.

Length of shock cord

PBO BEST BUDGET BUY

PRICE: £1.75 per metre

We thought it would be worth trying a DIY alternative, so we bought a length of 8mm shock cord which we looped around the boat's mooring cleats in a double loop. When required this could be looped twice around the tiller, holding it fast. With effort, you could still adjust the tiller a little, but it held it without difficulty. The slight 'give' in the shock cord actually helped the boat stay on course, especially in a quartering sea.

Also available

Tillerlock

PRICE: £28.60 ($48.95) +P&P

Contact: www.cansail.com

Another option which we were unable to obtain in time for the test is the Tillerlock, made in Canada. It's constructed from stainless steel and brass and comprises a locking lever which clamps either 8mm or 10mm line.

PBO verdict

So, is it worth buying one of these kits? They're no substitute for an autopilot, but on a well set up boat they will let you leave the helm for a short while, whether at sea or perhaps motoring slowly up a river so you can sort out the fenders.

Our favourite of the bunch was the TillerClutch, the simple yet compact design of which allowed you to flick the lock on and off as required in no time at all.

The Midshipman II Tiller Lock was a similar concept and held the line effectively, but the line was liable to fall out of the sheave when disengaged if it wasn't tight enough.

The Davis Tiller Tamer held the line captive and you could adjust the friction to suit your needs, but it was slow to release and engage and had the potential for snags.

Finally, the shock cord was cheap and simple – it didn't have the instant engagement of the TillerClutch and Tiller Lock and didn't hold the line as securely, but it was remarkably effective nonetheless. PBO

Drop-keel removal and repair

Arth Lilford removes and replaces the stubborn lifting keel on his Pegasus 800

Pegasus 800s are fine, versatile and friendly boats to sail, and they come in fixed-keel, bilge-keel and lifting-keel versions. The choice of a lifting-keeler was determined for us by our drying swinging mooring in Keyhaven; and having scoured the South Coast for a suitable boat, we bought ours from Ancasta in Falmouth. After purchasing her, our sail from Falmouth to Keyhaven was undertaken with some anxiety and a degree of bravado, but nevertheless safely considering the presence of two experienced sailors on a seaworthy boat.

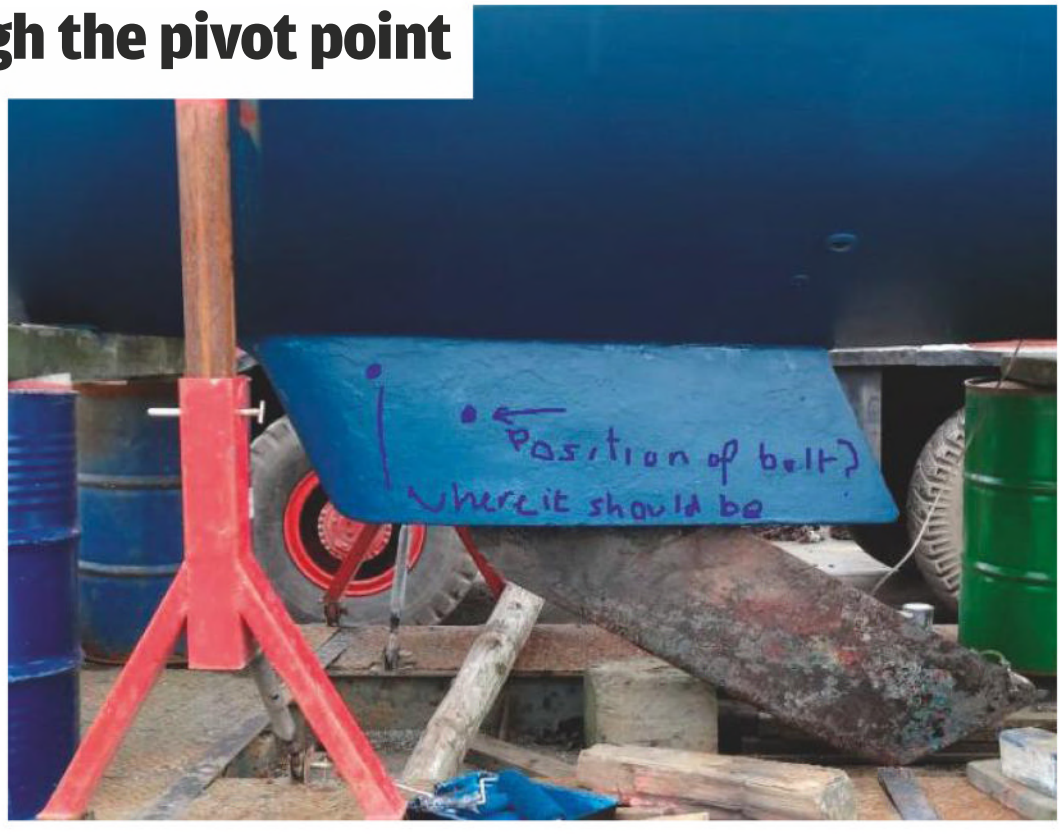
However, there was always some uncertainty when lowering the keel from the raised position as it didn't seem to go down as far as we felt it should, so we lifted her out in the April of that first year. With the boat chocked up on the hard it was impossible to move the blade of the keel, so we pressure-washed it and attempted to spray a liquid wax solution into the mechanism. This seemed to work after a fashion, and once the boat was back in the water we had some success in lowering and lifting the keel.

No pin through the pivot point

Fast-forward a few years, by which time the situation had become much worse. We thought the ingress of mud into the keel box was the problem, so out she came again.

This time we kept her in the lifting slings and tried to drop the keel by bashing the keel stub housing with prop poles. We had some limited success with this, and there was a little movement. Using a fulcrum pole close to the pivot point of the blade, we succeeded in increasing the movement: but to our dismay, the movement seemed to encompass the whole blade, including the pivot point. We quickly realised that there was no pin through the pivot point, and indeed a few moments later the whole blade simply fell out of the housing. This could have happened at any time when afloat, and in that situation we would have lost the blade.

The blade is made of cast iron and weighs around 100kg. There was no evidence anywhere on the keel housing or the blade of a pivot pin, and it took two of us using all our strength to lift the blade into the back of the car for further investigation. In the meantime we relaunched the boat minus the blade, and I must say she sailed very well without it.



The keel was marked up with the position of the pivot point. The cast iron blade weighs around 100kg

We searched the internet and boating literature for drawings of the construction of the keel system, but without success. The manufacturer had gone out of business, and we could find no support from anyone. It turns out that a pin is fitted in the top of the blade, but not through the keel housing: the blade is held in place by dropping the pin into a formed cross-slot from the top of the housing. The pin in our blade had corroded through and simply disintegrated.

So, the task before us was to clean the blade, identify the pivot point and remove the remnants of a rusted-in pin. We achieved this with persistence and determination, and a new stainless steel pin of 1in diameter by 4in length was procured, which fitted into the hole snugly. It was decided to cut the length in situ when we could measure the length of the slot.

Now came the tricky bit: it was necessary to lift the boat out of the water and, while she was held in the lifting slings, remove the retaining keel bolts from within the hull. Once these were removed, we had to clean the hull and keel housing faces, apply a sealing compound, lift the keel blade above the keel housing and insert it from above.

These activities are more easily said than done. One needs the greatest cooperation and understanding from the boatyard crew in terms of timing, allocated yard space, procedure, communication, experience and, of course, patience. These qualities were amply met by the boat lift-out crew of Lymington Yacht Haven: the office staff were also singularly accommodating and understood the difficulties and uncertainties of the operation, allowing time for the hoist to be free for our use.

ABOUT THE AUTHOR

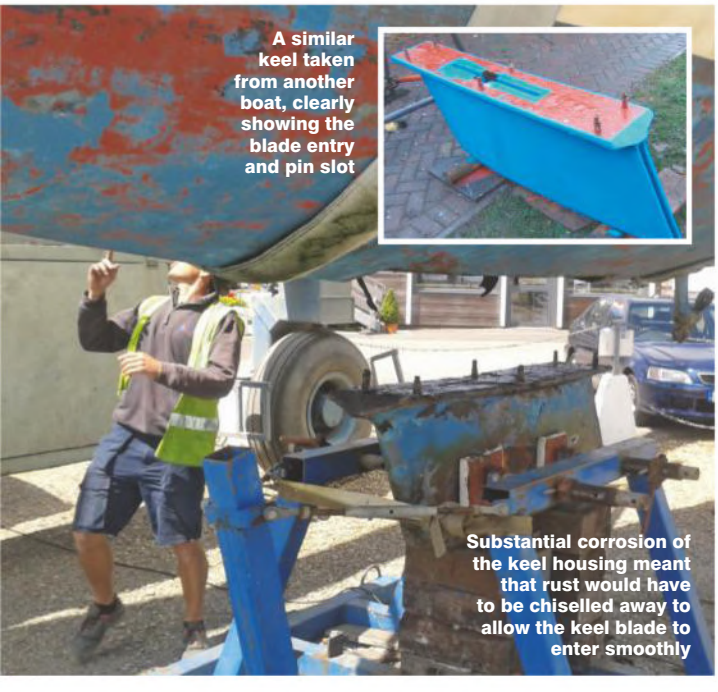
Arth Lilford learned to sail on a Wayfarer dinghy in 1975, and has sailed extensively in the Solent, the Channel, South Brittany and the Scilly Isles. He enjoys family cruising, with a little club racing to challenge his ability.

Detaching the keel housing

The process of detaching the keel housing proved to be most difficult. On the first attempt we expected the keel housing to simply drop off when the keel retaining nuts were removed from within the cabin sole, so we were careful in case it dropped before we were ready. No such luck! Despite bashing with prop poles, the adhesive held the housing firmly in place.

On the second attempt, the boatyard crew provided us with a keel housing clamp that would hold the housing while lifting pressure was applied to the whole boat. Even this was insufficient in itself. Ultimately it took a combination of side-to-side movement of the lifted boat against a clamped keel, together with a most useful vibrating power saw cutting blade (a Bosch multi-tool plunge saw) applied to the junction of the housing and hull cutting away the adhesive. In the end it also took the judicious application of a crowbar before we were successful.

A housing clamp held the keel while lifting pressure was applied to the boat. INSET After considerable extra effort, the keel housing was detached



A similar keel taken from another boat, clearly showing the blade entry and pin slot

Substantial corrosion of the keel housing meant that rust would have to be chiselled away to allow the keel blade to enter smoothly

Chiselling away the rust

The separation of the keel housing from the hull was not dramatic but slow and precise, all the while jiggling the hull, bashing the keel housing and applying the crowbar.

Time was critical because we did not want to occupy the lifting hoist any longer than absolutely necessary, so we hurriedly cleaned the mating surfaces, applied polysulphide adhesive and caulking string to the bolts, then offered the blade into the keel housing. It immediately became apparent that the space for the blade was too narrow: over the years, the corroding internal surfaces of the housing had reduced the space to the point where it was more than a centimetre too small. This did explain why we'd had problems with lifting and lowering the keel blade.

The solution was in the form of a small Kango jack hammer (an SDS drill in chisel mode) which enabled us to chisel away the rust formations preventing the keel blade from entering smoothly. Offering the blade into the top of the keel housing required a manual lift of approximately 100kg of blade: this could only be effectively achieved by one person, although aided by the many with verbal encouragement and some manipulation of judiciously positioned fulcrum poles. The entire process was accompanied by extremely persuasive language of poor sentence construction, but rich in four-letter epithets. However, accompanied by cries of jubilation and relief, the blade finally slid into place.

The boatyard crew then manoeuvred the hull in its slings to engage the six keel bolts. This they did with amazing skill, much gesticulation and a form of semaphore I have not seen before. They made the process look easy!

A job well done

Tightening up the keel bolts was straightforward, with correct tensioning at approximately 200ft lb. A short while later the boat was lowered into the water, and with some anxiety we checked for leaks in the cabin sole. Fortunately, there were none.

The next check was the lifting and lowering of the keel, which went smoothly and successfully. Our thanks go to the office staff and hoist crew of Lymington Yacht Haven Marina for their help and understanding in all the phases of the undertaking, and a job well done.

Following repairs, the boat is successfully lowered into the water

Beyond the pail

In attempting to unblock his boat's engine seawater cooling intake, and citing a historical precedent, Dave Ungless discovers how to drown yourself in a bucket

My father tells a remarkable story about a man he knew in the navy named Johnny Capes. My old man insists that he and Capes were great friends... but I've learned to close one ear when my father is telling a tale. Even so, the story of Capes' amazing escape from a sunken submarine is truly incredible: and nearly led to my own drowning when I tried the same technique many years later.

ABOUT THE AUTHOR

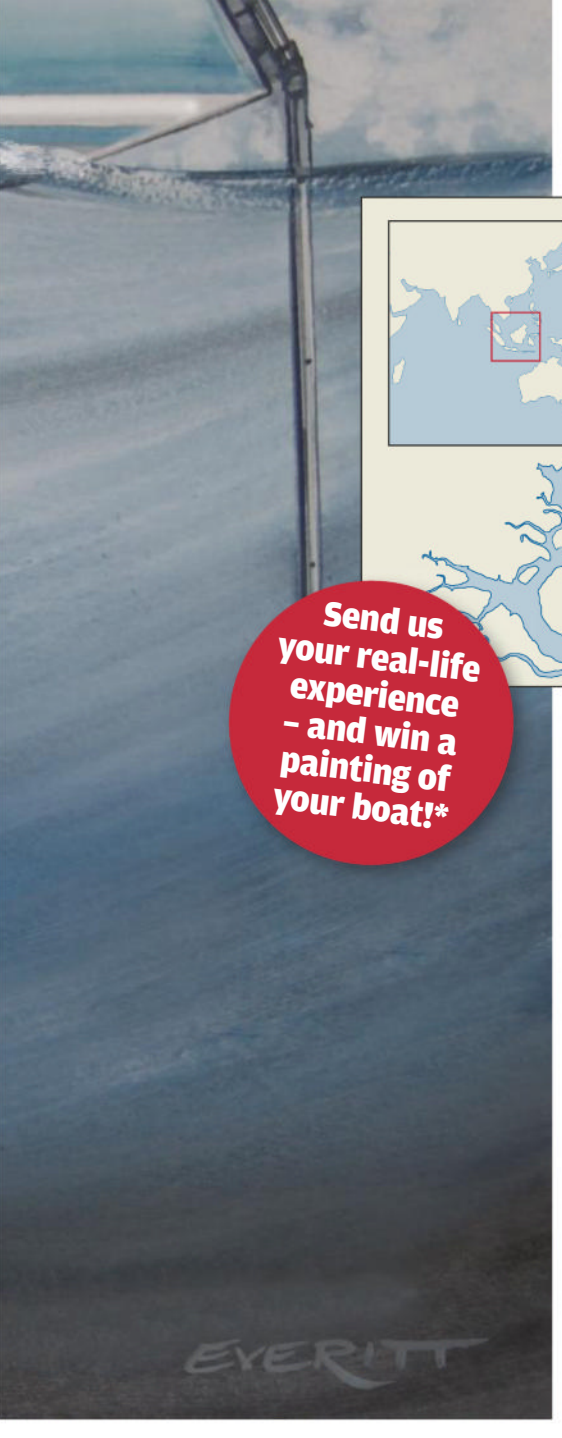
Dave Ungless is an experienced blue water sailor and holds RYA qualifications to Yachtmaster level. He has sailed with his wife Marie and her son Henry on board *Sänna*, their 15m (50ft) Bavaria Ocean, for the last nine years. Their sailing blog can be found at www.sailblogs.com/member/eastwards

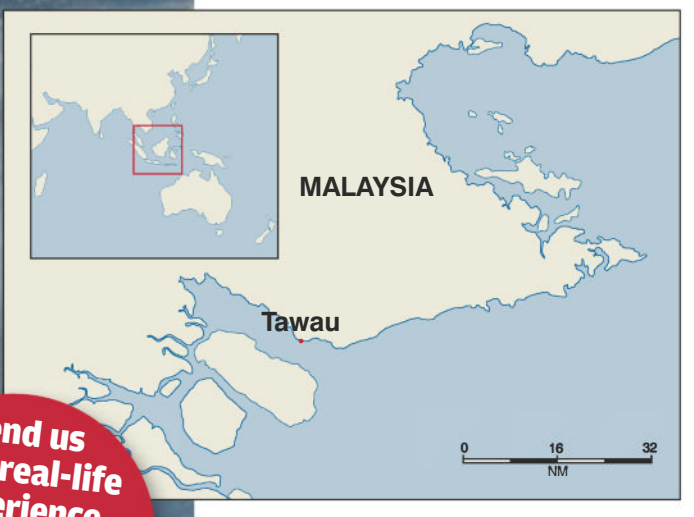
You see, Johnny Capes was the sole survivor of a British submarine, escaping through a hatch from a submerged depth of 180ft with just a bucket on his head. In 1941, during the Second World War, HMS *Perseus* struck an Italian mine and was lying critically damaged on the seabed in the Mediterranean, six miles off the coast of Cephalonia. Not only did Capes survive to reach the surface, he then swam the six miles to Cephalonia, was found and rescued by Cephalonian partisans, lived wild in the mountains and fought with the partisans against Italian occupiers for nearly two years before escaping to Turkey to find his long way home. Tough stuff, eh?

Much later, Capes and my old man became great friends. They were both submariners, and submariners have a special relationship the rest of us don't understand. Having said that, there's no concrete evidence that my father was ever in submarines. But nevertheless, when you're a kid you hang on to every word your father tells you. Like Capes, my old man was never a cultured fellow. He always had a Capstan Full Strength cigarette dangling from one side of his mouth – a death-defying feat in itself. These cigarettes were commonly referred to as coffin nails. But he has a skill in storytelling matched only by his own father who, incidentally, was the first man to jump without a parachute from a flaming First World War plane and survive by landing in a tree. The same thing happened again in the Second World War when he landed in the same tree.

Anyway, fast-forward to Croatia in 2004. Having just carried out repairs to my boat *Sänna* in Dubrovnik after the marina dropped another yacht onto mine, my father and I spent three wonderful months together while he helped get everything shipshape. Later, we were joined by three of his friends for a few weeks of carefree sailing I'll forever treasure. My father, in his captivating way, was at the centre of most of it.

However, his true magnificence came towards the end of our adventure. We had fouled a rope around our propeller, and someone needed to dive the boat to cut it free. This required skilful use of cutting gear





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underwater and a working knowledge of scuba diving. As we had no scuba equipment on board, I decided to employ a commercial diver. But why use a diver, my old man argued, when we could simply dive using a hosepipe to breathe, just like he and Capes when their torpedo boat suffered the same fate while under fire in the Bay of Inchon, Korea, in 1950?

So, out came the hosepipe, and Collin was designated to hold one end clear of the sea while I dived with the other end in my mouth. With knife in hand I submerged myself under the boat, happy in the knowledge I'd saved myself at least 50 quid. It's difficult to explain the laws of physics that prevent air passing down a hosepipe underwater when you breathe, but what followed was a near disaster as I fought for breath while dropping my knife, surfacing just in time to save my life... to see my father's grinning face with a coffin nail dangling from his mouth. It was my fault, he said: and Shaun should show me how it's done. I felt a little ashamed as Shaun took the hose in his mouth and disappeared beneath the boat. A minute or two later we hauled him up, using the rope we'd wisely tied around his waist as an afterthought. He was not in good shape.

Later, when the diver, Sergan, came to free the prop, we explained what we'd attempted with the hose. He gave it some thought and confessed he saw the logic in our plan. The next day, Sergan passed by to tell us he and his friend had tried the hosepipe theory earlier in the morning. Emotionally, Sergan added he'd had to call a doctor for his friend.

Fast-forward again to Borneo, 2012. Now sailing around the world on *Sänna* with my wife Marie, we were anchored off Tawau on the Sulu Sea, and Marie needed to fly back to the UK. I was left alone on board, at anchor in murky waters infested with jungle flotsam and fast-flowing currents. After a few days I was joined by an Australian catamaran owned by intrepid solo sailor Tony, who reminded me of my father in some ways. We became good friends.

At this stage, I was beginning to have second thoughts

After a few days *Sänna*'s engine, which I sometimes ran to charge the batteries, suddenly stopped. I quickly worked out that the engine seawater cooling intake was blocked: I would need to dive under the boat to unblock it. Although we had scuba equipment on board by then, our tanks were empty of air and I had no means of refilling them. Tony couldn't help either.

We discussed my options, and our talk gradually came around to the theory of the bucket. Johnny Capes must have thought this through. If you place a bucket on your head you can breathe the air trapped inside. It worked for Capes – and if we planned this carefully I had a means of working under the boat without the need to keep surfacing for air. I could simply put my head back in the bucket and take a breath or two. So, I located our bucket and tried it on. I remembered my father specifically mentioning Capes' advice to use the handle as a chin strap to ensure it stays on your head and doesn't just float away. And off I set. I lowered myself down the swim ladder with Tony's ample advice resonating in my ear.

My first attempt didn't get very far. The air inside my bucket prevented me from placing my head under the water because it acted very much like a buoyancy aid. Then Tony worked out I needed to adjust my weight by just the right amount to achieve something called negative buoyancy. So, with a few pounds of lead weight attached to my diving belt, we tried again. At this stage, I was beginning to have second thoughts – but I needed to impress my new-found friend. He was an Australian, you see.

This time, my heavier weight ensured a somewhat quicker descent. In no time at all I was under the water: much sooner than I intended, in fact. Those of you with a more scientific mind may already be aware of the laws of physics affecting what happens when you submerge yourself with a bucket on your head. The first shock is how dark it is: but you have to compose yourself by taking deep breaths to ensure you don't hyperventilate, a condition in which the body begins to panic because it thinks it's going to die.

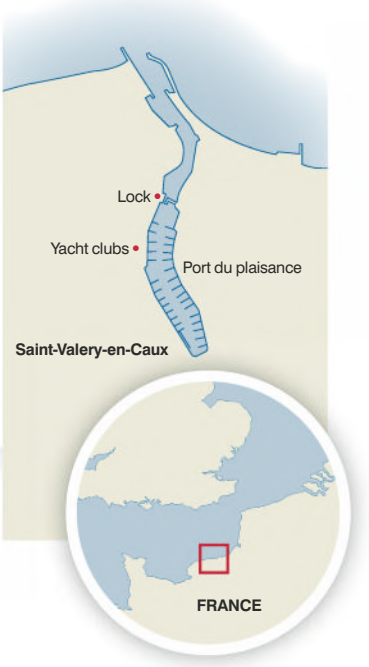
Just remember, when you're thinking about this, trying not to make a fool of yourself underwater with a bucket on your head, that the bucket begins to fill with water when you breathe in the air that's keeping it out. Of course, your air is replaced by the air you breathe out, but this somehow leaves the bucket of its own accord. Then, as you begin to turn upside down, you have to quickly figure out how to get the handle off your chin and the bucket off your head.

The late, great Johnny Capes was disbelieved by everyone, including the Admiralty, when he described how he escaped from the open hatch of HMS *Perseus* in 1941. He was even accused of deserting before the submarine sailed from Malta. The *Perseus* sank quickly after striking the mine and only Capes and four stokers remained alive. Together, in complete darkness, with water up to their chest and rising fast, they came up with a plan to open the hatch and rise to the surface 180ft above. Of course, there's no mention of a bucket. Using new and revolutionary emergency breathing gear that was never before tested at that depth, Capes and one other man took one last big swig of rum, opened the hatch and left. Only Capes survived.

In 1996, two Greek divers found the wreck of the *Perseus* exactly where Johnny Capes said it would be. They also located the still open hatch, and through the hatch they clearly discerned an empty rum bottle. Their photographs finally proved the incredible tale of the only man who survived. However, only my old man knows the absolute real truth, the whole story: that his mate Johnny Capes is the only man to escape from a sunken submarine with a bucket on his head.

*Send us your boating experience story and if it's published you'll receive the original Dick Everitt-signed watercolour which is printed with the article. You'll find PBO's contact details on page 5.

The head of the outer harbour is well within the shelter of the town and cliffs



A Normandy alternative to Fécamp

Richard Hare makes an impassioned case for Normandy's Saint-Valery-en-Caux, a haven he finds infinitely preferable to Fécamp…

For me, there's no contest: I'd settle for Saint-Valery-en-Caux over Fécamp every time. Sure, the entrance dries – no more than a rudimentary navigational challenge – but the reward of a sheltered haven behind the lock gates means there's none of the swell that can so blight the all-tide 'jaws agape' Fécamp. Walking distance into town is much shorter too, and it's spared an equivalent of the rather scary, neo-gothic and – let's be frank – Disney-esque abbey.

Not to be confused with estuary-bound Saint-Valery-sur-Somme (see PBO Jan 2014), 'En Caux' is located roughly equidistant between Dieppe and Fécamp, and is inclined to be overlooked by British boatfolk. True, the Shell Pilot doesn't exactly encourage visitors, with its reference to the town being flattened during World War II. It's undeniable that the town took a terrible pounding as British troops tried in vain to use it as an evacuation port during 1940 – a port that had to be abandoned in favour of locations such as Le Havre and Dunkirk. However, much of the old town remains – dating back to the 16th century, judging from appearances.

A walk through the Old Town on the west side before going up onto the cliff tops is well worth the effort. The attractive new town, meanwhile, can be found on the east shore. Energetic and well designed, it provides all kinds of options for provisioning and restaurants, and the little quayside bistro in particular offers excellent value and is fun, perfect for moules frites and a pichet of wine. With steep white cliffs and green hills each side of the natural harbour entrance, Saint-Valery charms its visitors from the outset. As one enters, it feels like a welcoming safe haven.

Navigation

As with many Normandy harbours, the entrance dries to about 2.5-3m LAT. However, with a neap range of 4.7m atop 2.4m MLWN, and a 7.8m spring range on top of 1m MLWS, there's abundant scope for most yachts to enter at around half tide. The lock to the inner harbour – the marina – is operated two-and-a-half hours each side of HW.

Apart from the four deep harbours of Boulogne, Dieppe, Fécamp and Le Havre, all Picardie and Normandy harbours are tricky, and particularly so when approached from the east as most tides will be taken on the nose. Negotiating them just requires some careful planning. As guidance, HW Saint-Valery-en-Caux is Dover minus 44 minutes. This means that for about three hours before HW Saint-Valery-en-Caux, the tide runs eastward past the entrance. After HW it runs very weak eastward for an hour, then gathers increasing westward strength for the remaining two hours. This makes Saint-Valery-en-Caux easily attainable from the west – where many hours of positive tide can be used from, say, Fécamp and Le Havre – but it is less approachable from the east as it's likely that only a couple of hours of weak foul tide and one hour of positive (ebbing) tide can be used with safety.

So, if approaching from Dieppe (east), allow about three hours and consider departing Dieppe at HW minus two hours Dover. A three-hour passage should put the yachtsman into the jaws of Saint-Valery harbour at one hour and 45 minutes after local HW,

A welcoming safe haven, Saint-Valery's harbour entrance dries at LW

ABOUT THE AUTHOR

Richard Hare grew up in Essex where he learned to sail. He now lives in Suffolk where he fitted out his Golden Hind 31, *Keppel*. He has sailed her to the Med via Biscay and the French canals, the furthest point being the Aegean. Job done, *Keppel* will seek a new owner soon.

Well-fendered (upholstered!) pontoons await visitors within the gates

comfortably before the lock gates shut. In this event, two hours of weakening foul tide needs to be faced.

The harbour

The attractive outer harbour is narrow and sheltered. On reaching the sheltered head of it there may be two waiting buoys. These are well within the town's shelter, but jilling around is normal if waiting a short while for the gate. The upper harbour ground is soft mud. It looks pretty accommodating. Once through the lock, there are two long visitors' pontoons – one to port, the other to starboard – and both luxuriously fendered. The lock-keeper instructs which one to steer towards. The starboard pontoon is nearest the ablutions block, and the port pontoon is nearest the town's facilities.

Mooring charges for a 31-footer were cheaper than average (€20 per night all-inclusive at 2014 prices). A yacht chandler on the west quay provides a comprehensive range of equipment to satisfy most needs.

The town

It's the town's architecture that makes the biggest impression, and for that we have to thank its textbook reconstruction after the pounding it took from the Wehrmacht during World War II. Considerably more of the original architecture remains than I had expected from the description in the pilot book, and there are impressive reconstructions of original buildings. Most impressive of all is the modern town architecture, with varied pitched roofs and chimneys. This, combined with live public art, complements the original old buildings to great effect. The town exudes energy and optimism.

There are several restaurants, but for me the dockside bistro feels more like the Ionian than the English Channel – always assuming the weather's sunny… Also on the 'new' side, a large open square beneath a modern church forms the heart of the new town, and is used regularly for street markets.

On the west side of the harbour, a short heritage trail starts adjacent to the tourist office in the large timber-framed building and takes one through the old town and up onto the cliff walk on the west cliff. Here, the views are spectacular, and on a warm day it would be an excellent spot for a picnic.

Evidently, not all of Saint-Valery was destroyed during the war

There are beaches on both sides of the harbour entrance, sand and shingle. This, combined with the hill top walks and the paddling pools built into the waterfront on the new zone, means that there is plenty to keep a family with youngsters happy, so long as the weather stays good. In foul weather, families may find it less appealing. There appear to be few 'amusements'.

And should you be in the vicinity on or around July 14 (Bastille Day), check out if there's a firework display. We coincided with this on one visit and enjoyed the party from the comfort of our cockpit. A handy tip – the display is staged out on the harbour entrance, so it's best not to be moored too close to the north wall.

Free anchorage!

Owers Lake, Southampton water

The entrance channel to Owers Lake from the inside, looking out towards Southampton Water

This free anchorage is sheltered and accessible to boats up to about 1.5m (5ft) draught, mid to high tide. Anchor in the middle of the pool, located directly under the chimney of Hampshire's Fawley power station.

You can get ashore at most heights of the tide. The Tightwad Sailor website (www.troppo.co.uk) advises sailors to get ashore at low water on the beach to the south of the dock entrance: don't use the pier as it gets locked, and don't use the slip to the north of the dock entrance, which is very muddy.

The area is a protected area for wading and shore birds including herons and egrets. It's also a very good vantage point for watching the cruise liners and general shipping using Southampton Water.

You can walk south-east from Owers Lake along to Calshot with its activity centre, castle and lifeboat station. The activity centre has a café bar, situated in the Sunderland Hangar. There's also the Bluebird Cafe on Calshot Beach, which is usually open from Easter to October.

Do you have a favourite free anchorage? Send it in! Email pbo@timeinc.com

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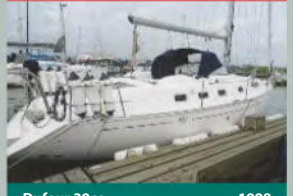

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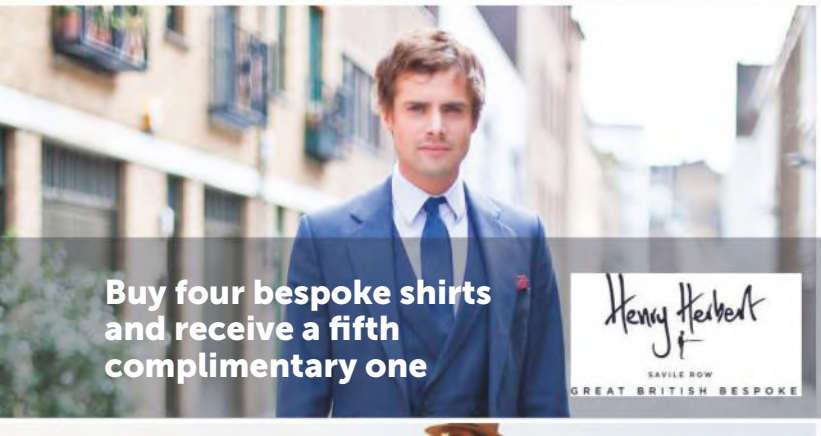

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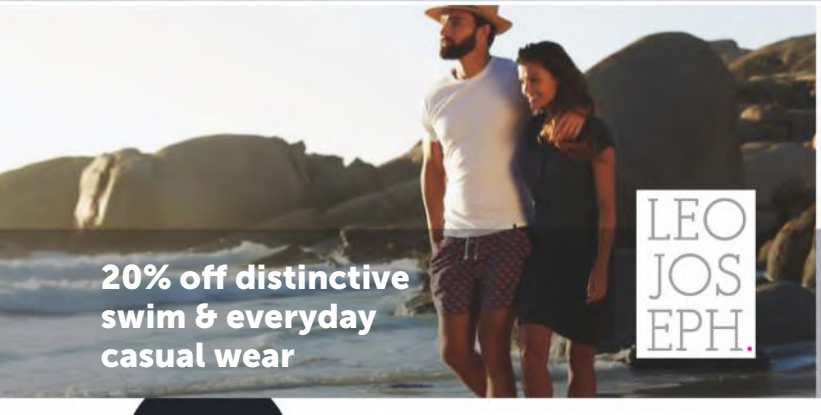

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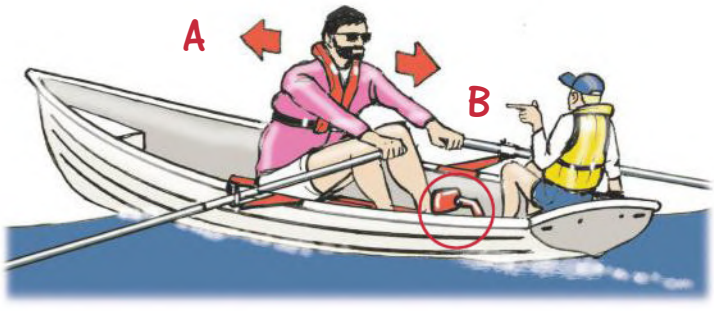
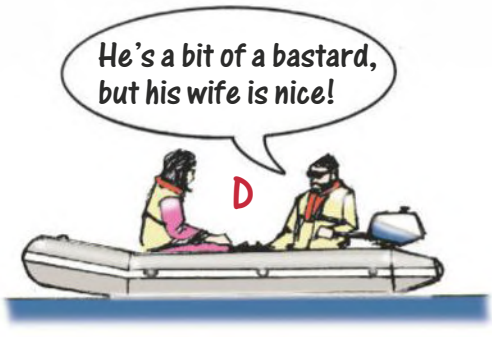
A few practical tender tips

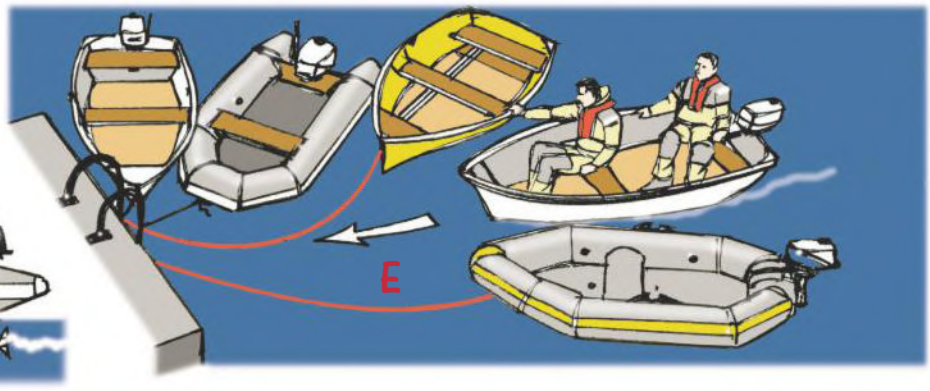


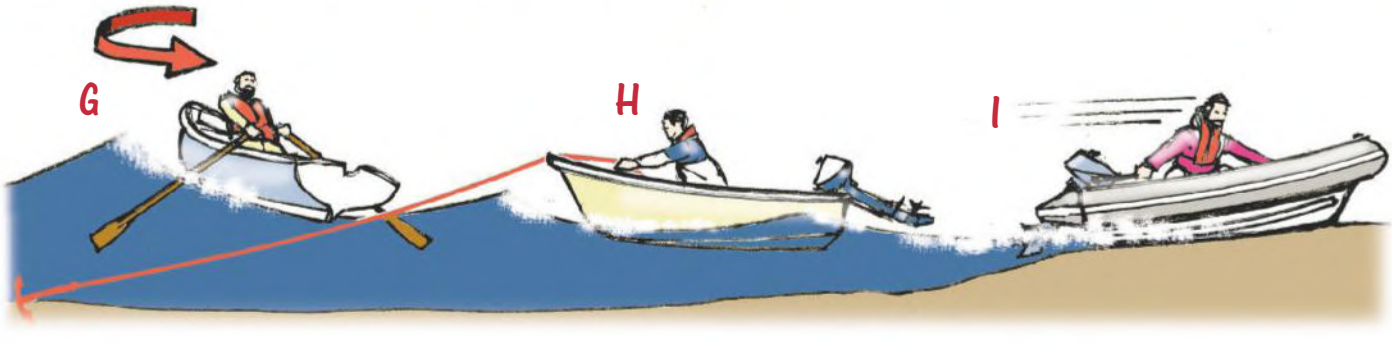
A. Some slimline tenders can be used as recreational exercise machines, because they are fitted out with sliding seats, outrigger rowlocks and very sophisticated oars. B. They can even be fitted with rear-view mirrors, which is something we plumper beings could copy. Or, we could just make sure our passengers point us discreetly in the right direction to save us having to keep turning around.

C. The famous Eric Hiscock said one reason for rowing ashore was so you can still have a quiet conversation, whereas people using an outboard engine don't realise how loudly they are talking. D. He heard this, when someone recognised him on his boat!



E. Another seemingly forgotten nicety is having long painters, so late arrivals can still push through other tenders to, say, the only ladder up the dock. F. However, under way, tie it in a loop so it can't reach your prop if it slips overboard!





G. When landing on a beach, it can be very difficult to see what the waves are like from seaward. If they are breaking, the traditional way of dealing with them is to turn quickly and back in, using the oars to keep the bows into the waves. H. Another method is to drop a bow anchor to keep the bows into the breakers, and then ease out the cable to get ashore.

Having a bow anchor out can also help you moor the dinghy and get her off the beach again. Obviously, an inflatable is more buoyant and softer if you do have problems. I. In an emergency, small modern RIBs with strong hulls and powerful motors can often be run straight ashore, keeping them riding on the backs of the breaking waves.

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